

# MARINE RECORD

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## LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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**THE ACTUAL STATUS OF THE CHICAGO DRAINAGE CANAL—SURFACE LEVELS OF THE LAKES TO BE LOWERED—QUALIFIED ENDORSEMENT BY THE CHIEF OF ENGINEERS—MARINE AND COGNATE INTERESTS CALLED UPON TO IMMEDIATELY INTERFERE—FIRST PUBLICATION OF AN IMPORTANT REPORT—THE VIEWS OF MAJOR MARSHALL, CORPS OF ENGINEERS, U. S. A.—COPY OF AN ACT OF CONGRESS—IGNORANCE REGARDING LAKE LEVELS.**

The MARINE RECORD is fully alive to the responsibilities of its raison-de-etre, in other words, what we are here for. We recognize the fact that lake levels must be maintained, and this, too, with a great big "must." It is now nearly, or perhaps, fully a decade ago, since we first brought to the attention of the lake marine the probable result of indiscriminately tapping the lake supply of water in the manner of conveying the precipitation of the lake watershed to other locations.

To further the marine interests of the lakes, and, incidentally (we are modest enough to assume) the world at large, we have obtained, through the courtesy of proper channels, the sanction and authority of the Secretary of War to publish the following report, etc.:

UNITED STATES ENGINEER OFFICE, }  
CHICAGO, ILL., April 24, 1899. }

Brig. Gen. John M. Wilson, Chief of Engineers, U. S. A.,  
Washington, D. C.

GENERAL: I have the honor to report as follows on the application of the trustees of the sanitary district of Chicago for authority to open their drainage canal. It is a strange fact that this city has expended, or will expend, over \$30,000,000 with the intention of diverting an apparently unlimited amount of water from the Great Lakes to the Mississippi drainage area for sanitary purposes without finding out whether such diversion would be allowed by the great interests of the United States and the colonies of Great Britain along the chain of Great Lakes in the navigation of the rivers and harbors of the Great Lakes. Now they ask the authority of an executive officer of the United States to open a channel that will, to some unknown extent, lower the levels of all the Great Lakes below Lake Superior and of their outlet, introduce a current, also unknown, and not to be ascertained otherwise than by actual experiment,

in the Chicago river, the most important navigable river of its length on the globe, but which is already obstructed by bridges, masses of masonry and bends, and of difficult navigation at best.

The possible effects of this diversion are not known, further than that to some unknown degree they will be injurious. Whether the amount of this injury will be so small as to be accepted by the interests affected in view of the manifest advantages to and apparent necessities of their neighbors, cannot be determined by other than the interests themselves.

It is clear to me that I am not competent to make a recommendation as to what should ultimately and definitely be done.

The matter of what effect the opening of this channel would have on the levels of the Great Lakes has been heretofore submitted to a board of engineers. That board reported that the Great Lakes would be lowered, but that there was not sufficient data to determine the exact effects of the proposed discharge, and recommended extended investigations, which it is believed are being carried on now by the Deep Waterways Commission, or Board. They have not reported. In my opinion the abstraction of from 300,000 to 600,000 cubic feet per minute will permanently lower Lakes Michigan, Huron and Erie from 3 to 8 inches; not more than 8 inches nor less than 3 inches, corresponding to an extreme reduction of from 160 to 466 tons in carrying capacity of the large vessels of the lakes, and that it will take from three to four years for this full effect to be attained. But the state law is unlimited in its requirements. Twenty thousand cubic feet per minute must be taken from Lake Michigan for each 100,000 population of the district; already nearly 400,000 cubic feet must be taken, and at the same ratio of increase for a few decades, in a very short time there must be taken 1,000,000 cubic feet per minute under this indefinite law. The amount should be limited and the injurious effect stopped somewhere.

The mean current to be introduced in Chicago river upon the opening of the canal is estimated by the engineers of the drainage board at  $1\frac{1}{4}$  miles per hour or 110 feet per minute. This is simply an assumption that with such velocity in an unobstructed river, the amount of 300,000 cubic feet per minute can be discharged through Chicago river—but I have seen this river so jammed with vessels, drawing all the water that is in it, that by leaping from deck to deck I could cross the river. What the velocity would be in such conditions with Lake Michigan on one side and a great fall on the other side of such vessels, no one knows. But it is a simple mathematical problem to determine the effect on steel-plate vessels of from 2,000 to 4,000 tons mass drifting upon or striking stone piers with a velocity of nearly 2 feet a second. They will go to the bottom.

Individually, I have to say that I am in entire sympathy with this people in their effort to purify their water supply. I have lost my only son from typhoid fever, produced, I believe, from drinking water polluted by defective drainage at Chicago, which this channel will correct. In every proper way I have aided the officers of the drainage district. I would like further to aid them, but I believe this question to be entirely out of my sphere, and too great and important for me even to venture an opinion or make a recommendation about. Yet I may venture to suggest that the entire subject be referred to Congress for final solution, and that a conditional permit or authority be granted to the authorities of the Chicago Sanitary District by the War Department, awaiting action by Congress, to open their channel, and under the following conditions:

1st. That if, at any time, it becomes apparent that the current created by such drainage works in the south and

main branches of Chicago river, be unreasonably obstructive to navigation or injurious to property, the Secretary of War reserves the right to close said discharge through said channel or to modify it to such extent as may be demanded by navigation and property interests along said Chicago river and its south branch.

2nd. That the Sanitary District of Chicago must assume all responsibility for damages to property and navigation interests by reason of the introduction of a current in Chicago river.

With 300,000 cubic feet per minute discharge it will take one year to lower the level of Lakes Michigan and Huron one-tenth of a foot, and several years to reach the maximum permanent effect of this discharge, which will not probably much exceed 3 inches, so that the main injury to navigation, if any, that can be expected before action by Congress, will be in Chicago river, and that can be at once abated.

All the changes made by the Sanitary District of Chicago, taken by themselves, have been such as to increase the navigable capacity of Chicago river. Taken in connection with the current to be introduced I am not able to say that the river will be as navigable as it was before these changes were made. The changes materially lessen the probable injury to navigation of this current, at the points where the changes have been, or will be, made.

I believe their channel will be entirely under control and that if the discharge be injurious it can be at once and at any time shut off, and it is evident that the War Department should reserve the right to control the current and discharge through the controlling works of this channel.

Very respectfully, your obedient servant,

W. L. MARSHALL,  
Major, Corps of Engineers, U. S. A.

WHEREAS, By section 10 of an act of Congress approved March 3, 1899, entitled "an act making appropriations for the construction, repair and preservation of certain public works on rivers and harbors, and for other purposes," it is provided that it shall not be lawful to alter or modify the course, location, condition or capacity of the channel of any navigable waterway of the United States unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of War prior to beginning the same; and

WHEREAS, The Sanitary District of Chicago, a municipal corporation organized under the laws of the State of Illinois, has constructed an artificial channel from Robey street, Chicago, to Lockport, and has been heretofore granted permission by the Secretary of War to make certain improvements in the Chicago river for the purpose of correcting and regulating the cross section of the river so as to secure a flowage capacity of 300,000 cubic feet per minute with a velocity of one and one-quarter miles an hour, it being intended to connect the said artificial channel with the west fork of the south branch of Chicago river at Robey street in the said city of Chicago; and

WHEREAS, The said Sanitary District of Chicago has now applied to the Secretary of War for permission to divert the waters of the said Chicago river and cause them to flow into the said artificial channel at Robey street as aforesaid; and

WHEREAS, The said Sanitary District of Chicago represents that such moveable dams and sluice gates as are necessary to, at all times, secure absolute and complete control of the volume and velocity of flow through the Chicago river have been constructed; now

THEREFORE, The Chief of Engineers having consented thereto, this is to certify that the Secretary of War hereby gives permission to the said Sanitary District of Chicago to open the channel constructed and cause the waters of Chicago river to flow into the same subject to the following conditions:

1. That it be distinctly understood that it is the intention of the Secretary of War to submit the question connected with the work of the Sanitary District of Chicago to Congress for consideration and final action, and that this permit shall be subject to such action as may be taken by Congress.

CONTINUED ON PAGE 12.





## CHICAGO.

*Special Correspondence to The Marine Record.*

Freights ruled steady this week at 3½ cents on corn to Lake Erie with a good demand for tonnage.

Capt. James H. Randall, Chicago, died at Benton Harbor this week. The Puritan, Lora, City of St. Joseph, and S. K. Martin are some of the vessels that Capt. Randall built.

With prices right and a date of delivery named, it is said that the Goodrich Transportation Co. would contract for two new steel steamers, it is now safe to say that they won't be built this winter.

President C. J. Booth, Vice-president E. J. Chamberlin, and Traffic Manager C. J. Smith, of the Canada Atlantic line, made a critical examination of the big package freighter Troy, during their visit to Duluth on Monday last.

The Edward Hines Lumber Co., of this city, now owns twelve vessels, and has six more under charter, all secured since the opening of navigation this year. The concern will have moved 200,000,000 feet of lumber by the close of the season.

The Goodrich liner Atlantic is now the company's only vessel running to the east shore. She is making three trips weekly, leaving Chicago Tuesdays, Thursdays and Saturdays. The Iowa and Indiana alternate on the Milwaukee run, and the Virginia, which is a more expensive boat to operate, has been retired for the season.

The fleet of canal boats recently purchased in Buffalo by the Chicago Railway Terminal Elevator Co. arrived Sunday in tow of the tug Boynton. They are the E. L. Congdon, W. M. Green and A. W. Stoneburgh, and they were towed to the Galena elevator. They will be put to work in the grain transfer business on the river in a short time.

In line with nearly all lake ports we are this week grumbling about shoal water in the river. It is just possible that when the canal is opened we may have a better flow of water and the depth kept up to what will accommodate anything that comes here, but as it is now a south-west wind knocks us out of at least six inches of depth and this means a great deal over the tunnel crowns.

River men say that the contractors working on the drainage canal by-pass at Jackson street are making a bad shoal that will cause endless trouble in the near future. The City of Paris went hard aground there recently, and the City of Venice just slid over the bar yesterday. It is claimed that the contractors are very negligent in removing the dirt excavated from the by-channel and allow it to accumulate in the river.

Barry Bros., the well-known Chicago tug men, have purchased the Huron line of steamers. The consideration could not be learned, but it is understood to have been about \$125,000. The Huron line operated but two steamers, the City of Fremont and the F. and P. M. No. 1, and did a passenger and freight business between Milwaukee and Chicago. Ill health is said to be the cause of Mr. Huron's retirement from business.

Civil Engineer Lyman E. Cooley, formerly a member of the Deep Waterways Commission, now makes the statement that the opening of the big drainage canal and the flowing of 10,000 cubic feet of water per second through the same will produce the effect of diminishing the flow of water through the St. Clair river 4½ per cent. We want and will no doubt secure the canal, but there is no desire to hurt other interests in bettering ourselves.

The Lake Michigan & Lake Superior Transportation Co. has started suit against Capt. James Davidson, of Bay City, for \$800, which, it is claimed, was the extent of damage received by the steamer Peerless, in collision with the barge Armenia in the St. Mary's river in July, 1898. The Armenia was being towed by the steamer Appomattox, and it is said by the transportation company that the Armenia crowded the Peerless to the side of the channel and finally rammed her on the port side, at the same time driving the steamer onto a dredge, which was tied to the bank of the channel. The case will be tried in Chicago.

W. H. Singer, Friday night dispatched his new purchase, the steamer Bon Ami, of the Chicago, Saugatuck and Douglass line, to Duluth, where the vessel will run next year in the south shore passenger trade. Mr. Singer was able to secure an excellent freight return from the boat for her first run to her new home. The Lake Michigan & Lake Superior Transportation Co. engaged her to help carry some of the package freight that has been filling up its local warehouses. The Bon Ami is to be remodeled slightly. As she is going on daylight runs on the Lake Superior course her staterooms will be taken out so as to give more cabin room. This will materially increase her passenger carrying capacity.

The question of a deep waterway connecting Lake Michigan and the Gulf through the route of the present drainage canal system, will be the subject for general discussion at the waterway convention at Peoria, Ill., on Tuesday. Delegates from every county bordering on the proposed waterway, also from Chicago and St. Louis, will be present. President Kingman confidently expects 450 delegates and a couple of hundred more who are interested in the proposition. Col. Taylor, of Governor Tanner's special drainage commission, who will pass finally on letting the water into the canal, says that the meeting will be a revelation and much good will be accomplished.

The schooner yacht Idler, recently bought from John Cudahy by A. R. Rumsey, the Cleveland shipping master, departed about 4 o'clock last Thursday afternoon for her new home. She will be taken down the lakes under her own sail. Captain Rumsey stated before his departure that the yacht had no good tow post, and he did not care to strain the foremast by making a towline fast to it. It is stated that Capt. Rumsey has bought the yacht for a capitalist of Cleveland. The new owner, it is said, intends to have the old craft rebuilt at considerable expense, and next summer she will be raced against the schooner Priscilla, which Dr. Bee-man bought in New York several years ago.

Capt. H. J. Davis, master and owner of the schooner Wenona, which was grounded near Houghton over a year ago, says that the report published in the Chicago papers, to the effect that the Wenona was a total wreck is untrue. Capt. Davis says the wreckers contracted to take her off the beach in July, and after delaying matters nine weeks, finally came to make a very weak bluff. He is satisfied that they had no intention of releasing her. He is much vexed at the report that her bottom was gone, which he terms a mistake. The captain has been with the schooner ever since the wreck occurred, and says he has watched her closely; that she is in good condition and there is no reason why she cannot be floated. He claims that he has not abandoned her yet by any means and hopes to induce certain wreckers to take up the work.

Grain shippers are putting forth every effort in their power to make good their promise of good dispatch held out to vesselmen last week. The elevators worked Sunday as though it had been a week day, and six boats received grain cargoes. They were the City of Venice, Alva, Robert Mills, Meade, Kalkaska and schooner Fryer. Some of the coal docks were working also, and on top of this came a big fleet of lumber vessels. Tugmen found it a busy day, and it was not until late in the evening that the business was fairly cleaned up. A jam at the Fort Wayne railroad bridge blocked the south branch late Saturday night and gave the harbor master a rude shock, for during the summer there have not been enough boats in the river at one time to make any sort of a jam. This held the lumber fleet arriving at the pier, and they were not moved up to their docks until Sunday.

All of the boats available were taken by local corn shippers Friday at 3½ cents per bushel to Buffalo. This rate bids fair to be held to the close of navigation, though the largest corn shippers, Armour & Co., announced flatly that they would not pay above that rate, though they would see that the vessel was given every possible facility to do business so that no time would be lost. All traces of the reaction of lake freights, which seemed to have set in ten days or two weeks ago were lost sight of yesterday in the uniformly firm market prevailing everywhere. Duluth was up ¼ cent on wheat, and there was firmness in ore, lumber and coal freights at the various points throughout the chain of lakes. Some of the results of carrying big cargoes at high rates are rather astounding when figured out. The steamer Crescent City, for instance, yesterday loaded 230,000 bushels of corn at Manitowoc for Buffalo at 3½ cents. On this cargo the American Steel & Wire Co., owners of the steamer, will receive a gross freight of a little over \$8,000. It will not take over four days for the steamer to earn that amount, or \$2,000 a day on the trip. If she comes back to Chicago with coal she will have a gross freight of between \$6,500 and \$7,000. The round trip could be made in a week from the time she started. Vesselowners are already beginning to compute what dividends they will receive by the close of navigation, and estimates run all the way from 25 to 50 per cent. according to the valuation and size of their vessels. On single trips nowadays boats make more than they were able to during most if not all of last season.

It is highly probable that all the interests concerned in the future of the Chicago river as a commercial highway will get together before Congress again assembles and agree on some sort of proposition that will have the combined weight of all of these interests behind it. In the past there has been a great deal of pulling and hauling in different directions by various parties whose interests are really identical. This puts Congress in a difficult position, as it is unable to act on any of the ideas presented. It is the plan of campaign on the part of local commercial people both in and out of the marine and dock line direct, to first agree on what they want, and then go after it with a force that, it is presumed, no Congressman here or elsewhere can stand against. In this spirit it is designed that all minor differences are to be buried, and, if necessary, many will be sacrificed in order to attain the great end desired. Investigation, inquiry and conference between the units of the interests involved are going on daily, and it is highly probable that something of a concrete nature will soon be evolved. The tunnels and the bridges are to be called upon for an overhauling that is certain to land the tops of the former at

a depth of at least twenty-two feet and that will entirely do away with center piers the length of the stream in both directions. The reports of the engineers on the removal of the swinging bridges at Taylor street and at the Grand Central station, between Twelfth and Taylor, in order to clear obstructions to the stream, have practically settled the leading interests in favor of rolling lift bridges, and on this and the tunnel question they may be said to be a unit. The progress made in the Calumet district by the few interests involved there, has awakened the immense moneyed interests lying along the main stream, and it is now as good as settled that they will work together effectively to some definite purpose.

## DETROIT.

*Special Correspondence to The Marine Record.*

Mr. Edward O. Avery, a prominent Alpena lumberman, died here on Sunday morning, last.

John Stevenson will rebuild the little steam barge Sakie Shephard, which was burned off the foot of Twentyfirst street, some time ago. She has been taken to Marine City.

The steamer F. R. Buell has been repaired after her hard grounding in the "Soo" river and is now as good as ever. The Detroit Ship Building Co. is to be credited with excellent and rapid work on the hull and machinery of the boat.

The schooner Mott, laden with coal for Port Huron, was beached at Marine City in the mud at the mouth of Belle river. She is leaking badly and an effort is being made to repair the leaks temporarily until she can be docked at Port Huron.

It will be pleasant news for the friends of General Passenger Agent Schantz, of the D. & C. line, to know that he is recovering from a severe fever. The process of recovery is slow, but he is steadily regaining strength and soon hopes to be around again with his accustomed vivacity.

Port Huron custom house records show that over forty transfers of vessels have been recorded there this season, and that the above number of vessels will change their hailport from Port Huron to some other district. The transfer of the Thompson Towing Company's tugs to the Great Lakes Towing Company accounts for quite a number of the transfers of the district.

The handsome steel yacht Dungeness, purchased recently from the Carnegies by the Fletchers, of Alpena, has reached Alpena. Dungeness was so named after the summer home of the Carnegies off the Georgia coast. As Mrs. Carnegie desires to use the same name for her new yacht, the Fletchers have consented to re-christen their acquisition and have selected Winyah as an appropriate one for their floating palace.

Mr. J. H. Graham, of the Graham & Morton Transportation Co., Chicago, visited here this week on the search for a speedy passenger boat to place on the St. Joseph-Chicago route next season. Mr. Graham could not be suited here and left for Cleveland. He wants a boat and a good one, so if there is nothing found at the lake ports he may proceed on to New York City and enter into negotiations for one of the Sound boats and bring her to the lakes. The Frank E. Kirby would no doubt have suited Mr. Graham, but as the saying goes, "money wouldn't buy her."

It is said that the Jenks Ship Building Co., of Port Huron, is asking \$170,000 for the Welland-canal-size steel steamer which they have under construction. The vessel will be a good one, especially from a structural standpoint. Her dimensions are 243 feet keel, 43 feet beam and 26½ feet molded depth. She will be double decked and in a general way similar to the Eureka and other vessels of her class. Engines will be triple-expansion with cylinders of 17½, 28 and 47 inches diameter and 40 inches stroke. Dimensions of boilers—two of them—are 11 by 12 feet, to be allowed 181 pounds steam pressure.

General Manager Henry W. Ashley, of the Toledo & Ann Arbor and the Menominee & St. Paul railroads, was in Menominee this week. He announced that business has been so pressing and matters have arranged themselves so the Ann Arbor road will attempt to navigate Green Bay waters all next winter. Mr. Ashley said: "I find that we must keep Menominee an open port, and this winter our boats will keep a channel open. We need two more car ferries that can transport more cars. The shipbuilders are so rushed that they could not promise to have boats of such dimensions completed in time for the winter campaign, so we will probably lease an ice crusher which will assist the No. 3 on this route." Mr. Ashley will not keep the channel open just the same.

A Washington special to the Detroit Free Press says the United States War Department has referred the protests of the Lake Carriers' Association against the construction of the canal through Kent county, Ontario, connecting Lake St. Clair with Lake Erie, to Col. Lydecker, with the request for a full investigation and a report. Col. Lydecker will report both as to the probability that the project will find adequate financial support, and as to its effect upon the level of the lakes, should it be carried out. It seems probable that if it is found that the Canadian project is being seriously considered with any prospect of its being actively entered upon in the near future, the State Department will take the matter up with the Canadian Government on the basis of a proposition to appoint a commission, which was earnestly advocated by Col. Lydecker and his colleagues in their report on the Sault power canal.—The Canadian Engineer, Toronto and Montreal.



W. G. Jenks, of Port Huron, has commenced suit against the Manhattan Steamship Co. for \$90,000 for breach of contract in injuries to his vessels, the steamers H. E. Runnels and Lloyd Porter. In October of last year Mr. Jenks chartered the two above named vessels to the company for a period of 24 months, the agreement being that the company was to pay \$1,250 per month for the first six months and \$2,500 per month thereafter, keep the boats in repair and insure them for \$56,000 and \$33,000 respectively. The claim is made that both boats were abandoned at New York after the Porter had been wrecked and damaged to the extent of \$20,000, and that the owners were forced to send to New York and bring the vessels back to the lakes.

The forthcoming report of the Commissioner of Navigation will contain some significant data of special interest to lake vesselmen. The records show the registrations on the lakes during the past year to have decreased in number while increasing in tonnage. In 1898, 3,256 vessels were registered, having an aggregate tonnage of 1,437,500 tons, while in 1899, 3,162 vessels were registered of a total tonnage of 1,446,348 tons. It is a suggestive fact that at Duluth the registrations increased from 153 vessels of a tonnage of 120,653 in 1898, to 204 vessels of a tonnage of 175,377 in 1899. The increase is said to be due to a more reasonable tonnage tax exacted in Minnesota than in Michigan, a fact to which the falling off in registrations at Detroit, Huron and Superior is also attributed.

### BUFFALO.

*Special Correspondence to The Marine Record.*

The D. P. Rhodes docked here this week to have her bottom calked and for minor repairs.

Grain receipts still average over the million bushel mark some days and never fall below half of that amount.

Coal is not coming in any too freely, yet what does come along is promptly shipped and the season will average up about as good as last.

Mr. John C. Fitzpatrick, agent for the Clover Leaf Line, at this port, visited Cleveland this week and called upon his many marine friends.

William Crosthwaite, has sold for their owners, the steamer Cormorant and consort barge, Alice B. Norris, to the Edward Hines Lumber Co., of Chicago.

Lumber for Tonawanda is moving very brisk. Several cargoes passed down on Monday, including the large schooner J. I. Case with part of her deck load gone.

The naval recruiting station at Main and Exchange streets is a busy spot these times and our navy is being duly increased each day. Applicants for enlistment in the grades of landsman, ordinary seaman and seamen continue to come in as rapidly as they did the first week the station was opened.

The large new steel cargo steamer Malietoa owned by the Minnesota Steamship Co., Cleveland, arrived here this week for the first time. She carried 286,000 bushels of wheat and flaxseed on a draft of 18 feet and discharged at the Eastern elevator. The Malietoa is one of the largest vessels that ever came to this port, yet there was no difficulty in handling her 474 feet of length in the creek.

According to the New York Tribune, W. T. Coleman Carpenter, secretary of the American Steel Barge Co., denied that the company had, as reported, sold its steamers and barges to the Oliver Iron Mining Co., which is affiliated with the Carnegie Steel Co. A controlling interest in the stock of the Steel Barge Co. had just changed hands, he said, but he declined to name the purchasing party or corporation.

The Canadian Minister of Public Works, J. Israel Tarte, says that when the work on the Canadian canals is completed grain can be carried from an enlarged harbor at Port Colborne to Montreal for two cents a bushel, and this thought causes him to exclaim: "Where would the port of Buffalo be then?" The Canadian Minister must come down lower than two cents. Wheat has already been carried to New York on the Erie canal at two cents a bushel, with a small margin of profit at that. Besides, the proposed improvements of the Erie canal would make two cents a bushel a fair profit.

Mr. McLeod Stewart, ex-mayor of Ottawa and promoter of the Montreal, Ottawa and Georgian Bay canal, says that field work on the surveys should be completed next week, and a report made to the Dominion government. The cost of the canal will be about \$21,000,000 or \$22,000,000, and with a government guarantee of 2½ per cent. for two years, the project could be completed in three years from the time of commencement. He says that the saving in distance would be 1,000 miles between Canada and Liverpool. This is one of the projects which the RECORD fears will tend to lower the general lake levels, but, if Chicago is to be permitted to drain off Lake Michigan it is difficult to see how Canadians can be stopped from tapping the waters of Georgian Bay, Lake St. Clair or any other point for that matter. There is surely a limit to this tapping process though and the earlier that it is found out the better it will be for all interests, private as well as national and international.

In two days last week about 10,000,000 feet of lumber was shipped from Duluth in vessels, something that breaks the records of all manufacturing centers. Lumbermen are preparing for a cut of 800,000,000 feet the coming season for mills in the Duluth district.

### CLEVELAND.

*Special Correspondence to The Marine Record.*

"Professor" Rumsey is bringing the sail yacht Idler here from Chicago. It is understood that she has been bought by Capt. James Corrigan.

Lumber at \$5 per M. feet from Lake Superior is a good charter. A shipper thought he could do better by rail and he was quoted a \$3 rate this week but they couldn't find him the cars.

Coal shipments come in so slow by rail that there was some difficulty experienced here this week in getting a proper supply of fuel. Several boats left port with only enough fuel to reach the rivers.

"Collision bend" is to be straightened out before the opening of navigation next spring. On the advice of the city engineer the municipality will purchase enough land to admit of the removal of the obstructions.

Col. Jared A. Smith, Corps of Engineers, U. S. A., will open bids Oct. 23 for removing the wreck of the schooner J. R. Benson, which, with a cargo of coal, foundered off Sandusky. She has been abandoned by her owners.

Efforts are still being made to release the schooner Minch, ashore near Ashtabula. It seems as if there was not one man in ten who knows what it is to have a vessel silted up with sand. Had the vessel been on a hard bottom she might, or rather would, have been floated off long before this.

President and manager Alexander McVittie and general superintendent Charles B. Calder, of the Detroit Ship Building Co., which is one of the plants operated by the American Ship Building Co., also W. E. Fitzgerald, of Milwaukee, assistant general manager of the American Ship Building Co., were in the city this week.

The report comes from good authority that A. B. Wolvin, of Duluth, has closed a contract with the American Ship Building Co. for two steel steamers of the Welland canal size. The boats will be sister ships of the steamer Eureka and will be brought out early next season. They will probably be constructed at the Cleveland yards.

Capt. A. B. Wolvin, of Duluth, is not yet out of the vessel business. I learn that he placed an order this week with the American Ship Building Co. for two steel steamers having the general dimensions of 254 feet in length, 43 feet beam and 26 feet depth of hold, for use next season in the Welland canal trade. Estimated cost, \$185,000 each.

Ore shipments for September were 2,369,306 tons, making the total for the season up to October 1, 13,016,219 tons against 10,994,201 tons for the same time last year. The increase over 1898 shipments is 2,022,018 tons. The total shipments for the season will not be far from 16,000,000 tons, and figuring on that basis the movement for October and November will be about 3,000,000 tons.

Capt. Watkins, late of the American liner Paris, has returned to the States and will make a fight against the verdict suspending him from duty for two years. Capt. Watkins is of the opinion that a much shorter suspension would have better met the situation from every standpoint. The local inspectors of steamboats at New York, before whom the case was tried, say that the verdict will stand, but Capt. Watkins doesn't think it will.

The steamer Eureka, owned by Mr. W. A. Hawgood, of this city, and others, and which was built for the coast trade, will remain on the lakes for another season. She is earning big money on the present rates of freight, and the outlook for next season is so bright that Mr. Hawgood has decided to keep the boat here. Mr. Arthur Hawgood is building a sister ship to the Eureka at the yards of the Craig Ship Building Co., Toledo. She will be launched in December and will be ready for business at the opening of navigation next spring.

Capt. Henry Kelley, Milan, O., writes to the Plain Dealer as follows: In the marine news of your issue Oct. 5 a statement was made by Capt. J. A. Andrews claiming to be the oldest captain on the lakes. I most respectfully beg to differ with the captain in his statement. I began my life as a sailor on the steamboat Superior with Capt. William Pease April 1, 1831, and have been constantly connected with the interests of the lakes up to the present date, either as sailor, mate, master, owner or builder. My first command was the brig North Carolina, built in Black River by Capt. Aaron Root and William Winslow of Cleveland. I am now in my eighty-fourth year.

It is now reported that A. B. Wolvin, of Duluth, has placed an order with the American Ship Building Company for two steamers of the Welland canal size. These, it is understood, will be out early next year, and it is said that they will be used to carry grain direct to Montreal. There promises to be more boats of this size built before very long. A good deal of the commerce that goes from the lakes to foreign ports is destined in the near future to be shifted from New York to Montreal as that is handier to the lake carriers, and with the smaller boats will not require three handlings, as at present. Montreal is getting ready for this business and has water enough now to allow ocean liners drawing twenty-two feet to come up there. They say also that they propose to continue until they are able to accommodate vessels drawing twenty-seven feet.

MISS MAY WHEELER, daughter of shipbuilder Hon. Frank Wheeler, was married last week to Dr. Clark, of Bay City.

### DULUTH-SUPERIOR.

*Special Correspondence to The Marine Record.*

Capt. and Mrs. F. N. LaSalle, of Duluth, who went to Nanheim, Germany, for the benefit of the captain's health, are now in Florence, Italy, where they will spend the winter. Capt. LaSalle arrived at Nanheim too late to take the baths and he was advised to go to Italy. Capt. LaSalle has written to his business partner, G. A. Tomlinson, of this city, that he is improving in health.

The Cleveland-built iron tug Record has been sunk again, this time by the steamer James B. Nielson, Capt. W. J. Hunt. This is the second time that the Record has been sunk by a Bessemer line boat, with loss of life on each occasion, although only one man, fireman Harry Ellis was lost in this casualty. The steamer is blamed for sinking the tug with the consequent loss of life.

The new dry dock, which has caused the contractors so much trouble because of the excessive wet summer and the consequent caving of the earth, seems now to be well in hand. If the present good weather continues and the contractors are fortunate in a fairly good autumn, they think it will be finished this fall, so it can be filled before things freeze up, and thus, give the company so much more room for repairing vessels during the closed period of navigation.

Schmidt Bros. have received the contract from the Great Northern Railway company to do all brick and stone work for the new elevator now under construction by the company. The contract calls for a wall of stone and brick, 42 feet high surrounding the steel tanks to be used as receptacles for grain. Two feet of the construction will be solid stone masonry and the remaining 31 feet will be of brick. On top of this the mammoth elevator with steel girding and plating. The roof will also be of steel. The contract amounts to \$40,000.

Iron ore people have now received complete returns on the movement of ore to Oct. 1 from the Lake Superior region. The total movement foots up 13,016,237 gross tons, which is an increase of 2,019,045 tons over the shipments of last year to the same date. If the advantage is maintained, and if the close of this season of navigation is not uncommonly early, it is expected that the shipments will be slightly in excess of 16,000,000 tons. The big mines, such as the Chapin, Fayal and Adams, have almost exhausted their stock piles, and shipping from such properties will be necessarily more restricted for the present month and in November. It is considered that under all the circumstances of this season of navigation the shipping of 13,000,000 gross tons of iron ore between May 1 and Oct. 1, is a great record. The iron ore shippers, who dropped out of the market for vessel tonnage, are in the market again. The rate is said to be \$1.75, with close figuring to get vessels, as \$1.85 and up to \$2 is asked for direct loading, and the grain rate is quoted at from 4¼ to 5 cents.

### SAGINAW AND BAY CITY.

*Special Correspondence to the Marine Record:*

The Boutell fleet of raft tugs are lying up.

Capt. M. Mahar, ex-U. S. boiler inspector is now U. S. sub-inspector of Saginaw Bay dredging.

The West Bay City merchants are much pleased to hear of the prospects of the Wheeler yard starting up again.

Work on the new Davidson dry dock is progressing rapidly. Capt. James is a hustler and his yard is a busy place.

The excursion steamers Josie and Ida are putting in their time now-a-days with fishing parties to Saginaw Bay and are doing well.

A. C. McLean, the vessel and tug owner, wears a very broad smile these days. Things are coming Mac's way in great shape.

The last catamaran built for the state survey of the St. Clair Flats by Capt. James Davidson, has just been delivered at the Flats. A gang of twenty-five men are now engaged on the survey.

The steam barge Chas. H. Davis is taking out her old boiler and putting in the boiler recently taken out of the W. P. Thew, which has been entirely overhauled. The sand sucker Pioneer takes the Davis boiler.

Campbell Bros., owners of the dredge Wild Irishman, who have the Sebawaing contract on Saginaw Bay, are having extremely hard luck. During the last blow the entire plant went on the beach high and dry.

Gordon Corning and the Ryan Bros., having sold the steam barge Oscoda and consorts Our Son and C. G. King to the Hines Lumber Co. of Chicago, will no doubt lead to Mr. Corning and others giving their order for a large steel steamer in the near future.

Mr. Horace Smith, inspector in charge of Saginaw river dredging under assistant engineer B. H. Muhle, states that it will take until next June to complete the work on Saginaw river. A uniform depth of 16 feet is being made from can buoy to Bay City, and 14 feet to Saginaw.

W. S. Carlin, of Detroit, was a visitor to our city Saturday, shaking hands with old time friends. Mr. Carlin has the contract for dredging the cut from Saginaw Bay into the Kaw Kawlin river for the intake pipe of the West Bay City water works. The dredge has been over the work three times and the sand fills in about as fast as it is dug out.



## LAKE SUPERIOR SURFACE LEVEL.

J. H. Darling, of Duluth, in the office of the United States Corps of Engineers, says that the high stage of water for the head of the lakes this year has probably reached the maximum, and from now on will go down. The stage of water has been quite remarkable on Lake Superior this year; it was the highest on record for 23 years. In the Duluth Superior harbor the water in September this year, according to the records in Major Clinton B. Sear's office, which are looked after by Mr. Darling, averaged  $10\frac{1}{2}$  inches higher than during the same month last year. The water during the month averaged 1.94 feet above low water datum, and one day, Sept. 6, all records for the office were broken when the water attained a stage of 2.73 feet above low water datum. The highest previous record was 2.65 feet above low water datum.

Lake Superior this year for the first time occupies a new position as regards stage of water to the other lakes. It was formerly the case that the Lake Superior cargoes destined for Lake Michigan ports, were limited to the stage of water in the Sault river. Now they are limited to the depth of the water in the Lake Superior harbors. It was formerly the case that the stage of water in the Sault river governed the draft of vessels sailing to and from Lake Superior for all vessels. But this undesirable distinction has been passed along and the draft of boats plying between Lake Superior and Lake Erie is governed by the depth of water at the Lime Kiln Crossing. Boats that load on Lake Superior for Lake Erie ports, or on Lake Erie for Lake Superior ports, now load to meet the limits of the crossing in the Detroit river instead of the shallow spots in the Sault river.

There is more uncertainty about the stage of water in the Sault. Vesselmen say that the winds may sometime make a difference of 18 inches in the depth of water at the crossing.

There is a common belief that the high water in Lake Superior is an assurance of corresponding improvement in the Sault river, which is the outlet of the big inland sea, but Mr. Darling says that this does not necessarily follow. He says that the stage of water in the Sault depends more on the stage of water on Lake Huron. While there has been exceptionally high water on Lake Superior this year, and it is now at the flood, there has been relatively low water on all of the other lakes in the system. There has been a fair stage, but owing to a rather limited rainfall as compared with the Lake Superior basin, they have not shown corresponding improvement. The high stage of water on Lake Superior has contributed more than it has been given credit for, in making it possible for the boats to move several million tons more freight to date than last season at this time, in spite of a late opening and an unusual number of delays as a result of strikes at various lake ports.

## COMPLETION OF THE SOULANGES.

The system of which the Soulanges canal is the completion consists of a series of short canals along the Canadian side of the St. Lawrence river. From Lake Ontario to Montreal the fall of the river is 221 feet, but this fall is not by a graduated descent, but by occasional rapids, which, while they are passable down stream by boats of adapted construction, are not satisfactory for commercial purposes. The canals were built at those points in the river where the rapids occur tapping the river above the rapid and debouching again into it below the rapid. All of these canals, with their locks, are now of the same capacity as the Welland canal. The Soulanges canal, just completed, has no peculiar physical aspects, and is interesting chiefly by reason of the fact that it is the last one of the system to be finished. It is on the north side of the river, near Montreal, and will, when finished, take the place of a shallow canal on the south side that was formerly used.

It is 14 miles long and has five locks. Like all the Canadian canals, its construction is excellent.

By the terms of the treaty of Washington, made in 1870, all Canadian canals connecting with the Great Lakes and the St. Lawrence river are open to American ships upon precisely the same terms as to those of British subjects. This provision makes the opening of the Canadian canal system of international interest.

Many years ago the Canadian canal system was begun by the construction of the Welland canal. This waterway enabled vessels to pass from Lake Erie to Lake Ontario past Niagara Falls. In 1884 a series of improvements were completed which made the Welland canal available for vessels of 14 feet draught. The locks were made 270 feet long

and 45 feet wide. At that time this capacity seemed amply sufficient, for the monster lake craft of to-day were not only then not in vogue, but were not dreamed of by lake shipbuilders or navigators. But while Lake Ontario was thus rendered accessible from the lakes, tidewater at Montreal could only be reached by means of flat bottomed boats of light draft going down the perilous rapids of the St. Lawrence river, or later on utilizing the shallow canals that have been deepened and reconstructed.

The completion and utilization of the Soulanges canal will enable a vessel to carry her cargo to Montreal direct, avoiding breaking bulk, saving time and terminal charges.

## TRAFFIC THROUGH THE ST. MARY'S FALLS CANALS.

STATISTICAL REPORT OF LAKE COMMERCE THROUGH CANALS AT SAULT STE. MARIE, MICHIGAN AND ONTARIO, FOR THE MONTH OF SEPTEMBER, 1899.

EAST BOUND.			
ITEMS.	U. S. Canal.	Canadian Canal.	Total.
Copper, net tons.....	16,529	225	16,754
Grain, bushels.....	2,121,133	71,000	2,192,133
Building stone, net tons.....	3,256		3,256
Flour, barrels.....	935,154	111,881	1,047,035
Iron ore, net tons.....	1,834,709	198,027	2,032,736
Iron, pig, net tons.....	3,630		3,630
Lumber, M. ft. B. M.....	145,956	686	146,642
Silver ore, net tons.....			
Wheat, bushels.....	6,780,094	1,605,811	8,385,905
Unclassified freight, net tons.....	6,231	5,684	11,915
Passengers, number.....	2,580	598	3,178
WEST BOUND.			
ITEMS.	U. S. Canal.	Canadian Canal.	Total.
Coal (hard), net tons.....	46,145	11,453	57,598
Coal (soft), net tons.....	329,559	61,793	391,352
Flour, barrels.....	25	200	225
Grain, bushels.....	12,000		12,000
Manufactured iron, net tons.....	28,654	1,023	29,677
Salt, barrels.....	45,905	7,000	52,905
Unclassified freight, net tons.....	56,374	2,581	58,955
Passengers, number.....	2,849	756	3,605
East bound freight, net tons.....			2,729,952
West bound freight, net tons.....			535,724
Total.....			3,265,676
Total craft through United States canal.....			2,286
Total craft through Canadian canal.....			402
Total registered tonnage through U. S. canal.....			2,688
Total registered tonnage through Canadian canal.....			326,443
			2,900,983

## A PARIS COMMERCE CONVENTION.

Arrangements are being perfected for the calling together of an International Congress of Commerce and Industry at Paris during the Exposition there next year, meeting for six days—July 23-29. Committees are at work preparing a program. Among the topics chosen for discussion are questions touching the facilitating of commercial exchange between different countries, in the way of trade treaties, free ports, commercial information offices; the simplifications of custom formalities; the relations of trade between colonies and mother countries; the influence of monopolies, of money exchange and of markets in futures on commercial affairs; and a comparison of fiscal systems of different countries. The taxing of stocks and bonds and its effect on commerce will be discussed, as well as trusts and pools, joint stock companies, legislation regarding lost stocks payable to bearer, bankrupt laws, apprenticeships, preparation of young men for colonial or foreign commercial missions, influence of military laws on commerce, the competition of women, and the handling of labor strikes. This Congress promises to bring much new light to present day commercial questions.

## VESSELS CLASSED.

Vessels classed and rated by the American Bureau of Shipping, New York, in the "Record of American and Foreign Shipping:" Screw, Ponce, owned by the New York & Porto Rico Steamship Co.; screw, Richmond, owned by the Old Dominion Steamship Co.; barge, Paxinos, owned by the Philadelphia & Reading Railroad Co.; tern, Abbie C. Stubbs; tern, Henry P. Mason; tern, Golden Sheaf; tern, Robert Ruff; tern, T. W. Dunn.

THE Parry Sound railway will, in future, be known as the Canada Atlantic. This change affects the road from Ottawa to Depot Harbour. The railway will be divided into three divisions, known as the eastern, the middle, and the western. The eastern division will be Swanton to Ottawa. The middle division from Ottawa to Madawaska. The western division from Madawaska to Depot Harbour.

## ARMOR PLATE TESTS.

The news comes to hand that a British metallurgist has produced an armor plate which cannot be shattered, and can scarcely be pierced by the most formidable projectiles fired by the highest explosives from a gun only 200 yards away. In tests at Shoeburyness steel plates six inches thick were used, backed, not by oak, but by a composite substance, presumably metallic, the nature of which is a carefully-guarded secret. The material of both layers had evidently been toughened to an extraordinary degree of resistibility. At 200 yards 350-pound projectiles were fired at a series of plates, the gun being charged with black powder. The plates were uninjured, and in some cases the shot was pulverized by the force of the impact. Cordite was next used, and with that the projectile was driven three inches into the plate, and upon certain adjustments being made, it was driven right through. But, though the plate was thus perforated, in no instance was it fractured. That itself indicates a great point scored by the armor-maker over the inventor of engines of attack. Up to the time of the Shoeburyness tests the best of plates would crack when struck at close range by the most destructive projectiles. A crack below the water line means disaster, for it cannot be mended on the spot. But a mere hole bored through a plate does not necessarily cripple the vessel so far as to put it out of the combat. Such an opening can be plugged, the vessel's sailing powers remaining unaffected. Thus the new plate marks an important advance in armor making. How the plate is made, tempered, or of what components, we are not told. The despatch describes it simply as made of the best steel. It may be an amalgam of nickel and steel, and may be harveyized, but if so, it has evidently been subjected to some additional treatment, and perhaps the composition of harveyized nickel-steel is modified to produce the British plate.

## LAKE COMMERCE AND SHIPBUILDING.

When our Canadian neighbors themselves admit that the lake carrying trade is rapidly passing to American vessels and supply the statistics to prove it, we may be fairly certain that such is the case with all in the way of gain to ourselves that is to be implied from the admission. Speaking of the small increase of Canadian shipping since 1887, the Montreal Witness says: "The proportion of freight carried by Canadian vessels through the Sault Ste. Marie canals has steadily decreased from 1887, when it was 7 per cent. only, to last year, when it was but an insignificant  $2\frac{1}{2}$  per cent. During this same period the value of American lake craft passing through these canals increased 150 per cent., while the value of the Canadian craft increased less than 20 per cent. and it may be expected, when later figures are to hand, that Canada will make even a poorer showing. In actual figures the value of the American lake craft passing through the "Soo" last year was \$45,199,800, while that of the Canadian craft was only \$2,491,000. In 1887, while there were shipped from Montreal about 10,000,000 bushels of wheat, mostly American, there were shipped from Fort William 17,600,000 bushels, 12,928,000 bushels of this being exported by way of Buffalo, the bulk of it in American bottoms, and only 2,000,000 bushels by way of Montreal."

To this statement of the Witness the Rochester Democrat and Chronicle adds the following: "The growth of shipbuilding on the American shore of the Great Lakes during the last two years has been amazing. The demand for shipbuilding material has been so great that importations have been necessary. With an adequate water route from Lake Erie to the Hudson there will be little danger of decadence in American shipbuilding on the lakes, or of a loss of supremacy in the carrying trade."

Commenting upon the foregoing the Oswego Daily Times says: "In these few words of our Rochester contemporary we have the case stated and the moral pointed, the moral being the need of 'an adequate water route from Lake Erie to the Hudson.' A ship canal on the American side of the Falls, with the work continued via the Oswego river, Oneida Lake and Mohawk river to the Hudson—a natural water route with an abundance of water all the way—and the work is done. It is a reproach to us, a shameful short-sighted business—this having to send to market the products of this great western empire of ours across a foreign and sometimes unfriendly territory. It is a reproach that should be taken away.

Fellow Servants.—An ordinary seaman and the mate or captain are not fellow servants. Keating et ux. vs. Pacific Steam-Whaling Co., 58 Pac. Rep. (Wash.) 224.



CORRESPONDENCE.

We do not hold ourselves responsible in any way for the views or opinions expressed by our correspondents. It is our desire that all sides of any question affecting the interests or welfare of the lake marine should be fairly represented in THE MARINE RECORD.

NOT ANSWERING DISTRESS SIGNALS.

TUG NIAGARA, ST. IGNACE, Sept. 22, 1899.  
*To the Editor of the Marine Record:*  
On the morning of September 5th, about 10 miles north-west of Gull Island, Lake Michigan, we were in serious trouble with the Niagara, having a raft worth \$40,000, which had been broken up during the night previous, and we needed to get word to some telegraph office to get assistance. At 9 o'clock that morning the U. S. steamer Michigan passed within about a half a mile of us without paying the slightest attention to our distress signals, which were blowing from the time the U. S. S. Michigan came within hearing distance, until she passed out of hearing, and what looks still more reprehensible on the part of her captain is the fact that they passed close to, and saluted, the fishing tug Margaret McCann, some six or seven miles farther east, after passing us, without reporting us in trouble. What I would like to know is, are there any rules of the Navy Department which prevent a master of a U. S. vessel from answering a signal of distress and at least learning what is the matter, or does the matter rest with the captain, or officer in charge, the same as in the merchant marine?  
Yours respectfully, LEWIS RYERSE,  
Master Tug Niagara.

THE CLIPPER SHIP YOUNG AMERICA.

CHICAGO, Oct. 7, 1899.  
*To the Editor of The Marine Record:*  
The beautiful picture of the American clipper ship Young America in your last issue, tempts me to give you the history of that famous ship, of which my father, the late Capt. D. S. Babcock was the first commander.  
She was built at New York and launched April 30, 1853, by Wm. H. Webb in his celebrated yard at the foot of Sixth street on the East river, for George Daniels, D. S. Babcock, W. H. Webb and others.  
My father sailed her in the China trade for six years, during four of which my mother accompanied him, and my brother David was born aboard the ship in the harbor of Shanghai, China, in 1856.  
She was 235 feet length on deck, 248 feet over all, 40 feet 2 inches molded beam, 25 feet 9 inches depth of hold, and 2,300 tons C. M., with three decks, a full rigged ship and the first American ship to carry double topsails. In a recent work descriptive of the vessels he has built, Mr. Webb gives her history as follows:  
Clipper Ship Young America, built expressly for the California and East India trade, in 1853, was a most beautiful and successful ship and made many very rapid passages under different commanders. Among others, from New York to San Francisco, 103, 107, 110, 112, 117 and 116 days. San Francisco to New York, 92, 97, 85, 101, 103 and 83 days, the latter being the shortest record for loaded ship. San Francisco to Liverpool, 103 and 106 days, and Liverpool to San Francisco, 117, 111 and 99 days, the latter being the shortest on record. New York to Portland, Ore., 127 days; Portland to San Francisco, 7 days; San Francisco to Antwerp, 118 days; New York to Liverpool, 18 days; Liverpool to Melbourne, 81 days; Callao to Queenstown, 74 days; Glasgow to Otago, New Zealand, 88 days; Otago to Callao, 36 days; San Francisco to Hong Kong, 47 days; Manila to New York, 98 days.  
This ship, after 30 years of continuous service with only slight repairs, was sold to Austrian parties, who changed her name. No other sailing ship has made such a record.  
Liverpool to San Francisco (13,800 miles) in 99 days. Wonderful passage and shortest on record. This ship beat in a race from San Francisco to New York, the noted English clipper ship Escosesa, leaving port on same tide, five days; and the still more noted clipper ship David Crockett, sailing about the same time, 11 days.  
She sailed on a voyage from New York to San Francisco from 50° of latitude in the Atlantic ocean to 50° of latitude in the Pacific ocean in six consecutive days.  
After her sale to an Austrian firm, about 1883, she was renamed the Miroslav, and, doubtless because of the usual policy of foreign owners of not keeping their ships in proper repair, she sailed from New York for Fiume in 1886, and "came home a-missing," after 33 years of honorable service.  
Yours truly,  
W. I. BABCOCK.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT,  
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 10TH DISTRICT,  
BUFFALO, N. Y., Oct. 10th, 1899.  
Notice is hereby given that the following changes in the buoys at the entrance to Maumee Bay Straight Channel, Lake Erie, Ohio, will be made about October 20, 1899.  
Maumee Bay Straight Channel Entrance Gas Buoy, No. 1, will be moved 1,600 feet outward, N. E. by E. 1/8 E.  
Lower Entrance Buoy, No. 2, will also be moved 1,600 feet outward, N. E. by E. 1/8 E and placed opposite the Gas Buoy No. 1.  
An additional 25-foot red spar buoy, to be numbered 2 1/2 will be placed in the present position of Lower Entrance Buoy No. 2.  
By authority of the Light-House Board.  
FRANKLIN HANFORD, Commander, U. S. Navy,  
Inspector 10th Light-House District.

POSITIONS IN THE LIGHT-HOUSE SERVICE.

LIGHT-HOUSE ESTABLISHMENT,  
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 9TH DIST.,  
CHICAGO, ILL., Oct. 7, 1899.  
Notice is hereby given that applications, on proper forms, will be received for thirty days from the date of this notice, at the office of the U. S. Light-House Inspector, room 1431 Marquette Building, Chicago, Ill., for the purpose of forming an eligible list from which to fill vacancies for master, mate, engineer and assistant engineer of vessels in the light-house service, which may occur in the ninth light-house district, for one year from date of examination.  
The ninth light-house district includes Lake Michigan, Green Bay, and tributary waters lying west of a line across the Straits of Mackinac at Mackinac Point, Mich.  
Persons who wish to apply for the examination for the foregoing positions should obtain the proper blank forms of application from this office, either in person or by mail, and after filling them out return them to this office. Applicants need not appear in person.  
All applications received will be examined, the applicants graded according to merit, and a list of those eligible for appointment sent to the Light-House Board.  
F. M. SYMONDS, Commander, U. S. Navy,  
Inspector 9th Light-House Dist.,  
Chairman Local Civil Service Board.

NAUTICAL EXPERT, NAVY DEPARTMENT, HYDROGRAPHIC OFFICE.

The United States Civil Service Commission announces that on October 17, 1899, examination may be taken for the grade of Nautical Expert, Navy Department, Hydrographic Office, in any city in the United States where the Commission has a board of examiners.  
The examinations will consist of the following named subjects, which will be weighed as follows:  
Letter-writing.....10  
Pure mathematics.....30  
Physical geography.....20  
Nautical definitions.....20  
Navigation.....20  
Total.....100  
The age limitations for this position are as follows:  
Minimum.....twenty years  
Maximum.....none  
From the eligibles resulting from this examination certification will be made to fill the position of Nautical Expert, Hydrographic Office, (Navy Department), at a salary of \$1,000 per annum.  
This examination is open to all citizens of the United States who comply with the requirements. All such citizens are invited to apply. They will be examined, graded, and certified, with entire impartiality and wholly without regard to any consideration save their ability as shown by the grade attained by them in the examination.  
Persons desiring to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application blank (Form 304), which should be properly executed and promptly forwarded to the Commission, at Washington, D. C.

POT-LEAD.

Each year yachtsmen and small boat owners are becoming better acquainted with the value of black-lead, called by some pot-lead, for the bottoms of their boats. It largely lessens friction, enabling the boat to go through the water much easier, and therefore much faster, with same power.  
Dixon's "Pot-Lead" is well known to almost every yachtsman as it has been the winning factor in many a close yacht race. The Puritan, Priscilla and other Yankee yachts were thoroughly "pot-leaded" with Dixon's "Pot-Lead," and the Columbia has, without doubt, her bottom coated with the same material, which is unapproachable for smoothness and slickness.  
DR. EKHOLM, Professor Nathorst and Captain Andree believe that the buoy marked "Andree Polar Expedition," found on the 9th ult. on the north coast of King Charles Island by the master of the Norwegian cutter Martha Larsask, is one of those which the aeronaut intended to throw after the North Pole was passed.

SHIPPING AND MARINE JUDICIAL DECISIONS.  
(COLLABORATED SPECIALLY FOR THE MARINE RECORD).

Obedience to Orders Not Negligence—Obedience of a seaman on board ship at sea to the orders of the mate or master is not negligence, though he knows the danger. Keating et ux. vs. Pacific Steam-Whaling Co., 58 Pac. Rep. (Wash) 224.  
Assumption of Risk.—A seaman does not assume the risk to one furling the main sail from the unsafe condition of the towing appliances, where before starting on the voyage he stipulates that the main sail shall not be used. Keating et ux. vs. Pacific Steam-Whaling Co., 58 Pac. Rep. (Wash.) 224.  
Stipulation that Main Mast Shall Not be Used.—Though a sailor has signed articles before going aboard, he may, on examining the vessel and finding its appliances for towing unsafe, for one working about the main sail, stipulate, as a condition to his going on the voyage, that the main sail shall not be used. Keating et ux. vs. Pacific Steam-Whaling Co., 58 Pac. Rep. (Wash) 224.  
Safe Appliances.—Admission of opinion evidence that towing from a main mast, at the same time using the main sail with the main boom, with a guard timber across the vessel, between the mast and stern, to keep the towline from catching in chocks on each side of the stern, is dangerous, is harmless error, where the facts, showing that the appliances for towing were unsafe, are of such controlling force that it is difficult to see how the jury could have arrived at any other conclusion than that plaintiff, one of the vessel's crew, was not provided with reasonably safe appliances when directed to furl the main sail, in doing which he was injured. Keating et ux. vs. Pacific Steam-Whaling Co., 58 Pac. Rep. (Wash.) 224.  
Salvage—Amount and Apportionment — Evidence Considered.—The Sir Robert Fernie, a steel bark, worth from \$75,000 to \$100,000, and loaded with a cargo of wheat of the value of \$96,000, was moored to a buoy in Tacoma harbor, when, about 10 o'clock on a stormy night, with a southwest gale, the buoy's anchor chain parted, and the ship began drifting broadside towards the north shore. Her windlass had been taken out for repair and she had no means of handling chain cable, and had only part of her complement of men. She sent for the tug Fairfield, which, though short-handed, came to her assistance. Being unable to procure further help, the Fairfield, which was a new boat, by the utmost exertions, during which she severely strained her machinery, succeeded in holding the ship off the beach, near which she had drifted until the wind abated, and, after five hours' work, brought her back to anchor uninjured. Held, that in view of the certainty that serious injury would have resulted to the cargo, and probably to the ship, but for the efforts of the tug, which involved danger to both tug and crew, the owners and the crew were entitled to salvage, which was awarded in an aggregate of \$5,300. The Sir Robert Fernie, 96 Fed. Rep. (U. S.) 348.

SUN'S AMPLITUDES.

The following approximate amplitudes of the Sun's rising will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset, by reversing the east bearing given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the Sun's setting. The bearing may be taken when the Sun's center is on the horizon, rising or setting. The three elements which may be obtained by taking these amplitudes are the quantities known as local attraction, variation and deviation.  
LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.  
Sunrise. Amplitudes. Bearing P'ts. Bearing Comp.  
Oct. 13.....E. 10° S. = S. 7 1/8 E. = E. 7/8 S.  
Oct. 16.....E. 12° S. = S. 7 E. = E. by S.  
Oct. 19.....E. 13° S. = S. 6 3/8 E. = E. by S. 1/8 S.  
LAKE ONTARIO, S. END HURON AND CENTRAL PORTION LAKE MICHIGAN, LAT. 44° N.  
Sunrise. Amplitudes. Bearing P'ts. Bearing Comp.  
Oct. 13.....E. 11° S. = S. 7 E. = E. by S.  
Oct. 16.....E. 12° S. = S. 6 3/8 E. = E. by S. 1/8 S.  
Oct. 19.....E. 14° S. = S. 6 3/4 E. = E. by S. 1/4 S.  
N. END LAKES HURON AND MICHIGAN, LAT. 46° N.  
Sunrise. Amplitudes. Bearing P'ts. Bearing Comp.  
Oct. 13.....E. 11° S. = S. 7 E. = E. by S.  
Oct. 16.....E. 13° S. = S. 6 3/8 E. = E. by S. 1/8 S.  
Oct. 19.....E. 14° S. = S. 6 3/4 E. = E. by S. 1/4 S.  
LAKE SUPERIOR, LAT. 48° N.  
Sunrise. Amplitudes. Bearing P'ts. Bearing Comp.  
Oct. 13.....E. 12° S. = S. 7 E. = E. by S.  
Oct. 16.....E. 13° S. = S. 6 3/8 E. = E. by S. 1/8 S.  
Oct. 19.....E. 15° S. = S. 6 3/8 E. = E. by S. 3/8 S.  
With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.





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CLEVELAND, O., OCTOBER 12, 1899.

OUR thanks are due the Hon. Eugene T. Chamberlain, U.S. Commissioner of Navigation, for an advance copy of the "Code List of Vessels," 1899.

ORDERS within ten days, for the construction of nine steel steamers, is an indication of the briskness of business on the lakes. The possibilities of next season are also outlined in the placing of these orders.

THE narrowest channel in the connecting waters of the lakes should exceed the length of the longest craft afloat. This is necessary in the event of a vessel grounding and swinging so as to obstruct the fairway.

Two new steel steamers for Eddy Bros., of Bay City, two more for Capt. Wolvin, of Duluth and five for the Oliver Iron Mining Co. (Carnegie Steel Co., Ltd.) shows about a two and a half million dollar investment in ship construction and equipment this week.

WHAT about the Poe memorial that vessel owners were going to place at the "Soo" locks, or in that immediate vicinity? Some action should be taken in the matter this winter, if only to dump a block of granite in the vicinity with a suitable inscription carved thereon.

IT SEEMS that some attention should be given to the bottom surface in considering lake levels, the contour and slope of the bottom will have much to do with the water levels. The action of the winds on the water surface must also be taken into consideration wherever remedial measures for maintaining levels are suggested.

THE purchase of the whaleback fleet by the Rockefellers was the starter of the week, now we have the Carnegie-Oliver interests placing an order for five cargo steamers of 8,000 tons capacity, with more orders in the air than the American Ship Building Co. can attend to. However, there is no reason yet why vesselowners should charter ahead for next season's work.

CANADA can claim a share in the praise that is being given the Atlantic liner steamship Oceanic, as her designer, W. J. Pirrie, is a native of Canada, having been born in the city of Quebec in 1847. After completing his education at the Royal Belfast Academical Institution, he devoted himself to engineering and shipbuilding. He is now chairman and principal of Harland & Wolfe, Ltd., and has designed and built some of the largest and fastest steamers afloat, including the Majestic, Teutonic, Canada, Cymric and Pennsylvania.

## TWO SIDES TO THE QUESTION.

Relative to inspecting Canadian passenger steamers in American waters, or even having our inspectors go to a Canadian port, to facilitate owners by inspecting at the home port, there appears to be two sides to the question. The Supervising Inspector-General of Steamboats asks the Secretary of the Treasury to make Canadian owned tonnage pay for every inspection by his corps of officers, yet, there seems little sense, equity or justice in the request if we look at the facts as they are.

According to the Canadian Engineer "objection has been made to paying fees for the inspection of United States vessels running to Canadian ports, though the Canadian officials have been carrying out the law of Canada, whereby Canadian vessels were charged inspection fees. American vessels were treated in exactly the same way. For the past ten or more years the American government has been in the habit of inspecting Canadian vessels running to American ports. The Canadian government has repeatedly requested the American government to accept the Canadian inspection in American waters in lieu of the United States inspection being accepted in Canadian waters, but this reciprocity had not met with favor. The margin of safety under the Canadian law is said to be much greater than that under the United States law. In the first place the steam boilers of Canadian vessels are not allowed to use within 25 per cent. so high a steam pressure as is permitted under the American inspection."

From the foregoing it would appear that the Supervising Inspector-General of Steamboats is exceeding the duties of his office in seeking reprisals.

Tonnage certificates regarding measurements, a ship's register, class and the several other papers are universally accepted from an international standpoint and why not the boiler inspection? There is just a chance that Mr. James A. Dumont may be unnecessarily stirring up a feature on which no contention should exist. The Canadian inspection of boilers being correct in every particular why should we insist upon a re-inspection?

IT is understood the question of building a dam and other works in Niagara river to raise the water in Lake Erie and the Detroit and St. Clair rivers will receive attention at the coming session of Congress. It has been said that the engineering branch of the War Department will be forced to consider the project regardless that it is in direct opposition to the dredging that has been going on for a number of years, because interests all along the Great Lakes are taking up the matter. Representative Corliss, of Detroit, sent a communication to the War Department on the question of lake levels, in which he says: "About two years ago Congress authorized the appointment by the President of a deep waterways commission for the purpose of ascertaining whether a deep waterway could be established from the Great Lakes to the ocean. The deep waterways commission, I am cordially informed, from its investigations, will report to Congress that by an expenditure of \$1,000,000 in damming the Niagara river below Buffalo, the mean level of the waters of Lake Erie can be raised three feet, those of St. Clair two feet, and Lake Huron one foot, elevating the mean level of the waters of the Detroit river at the Limekiln Crossing three feet, and thereby maintain perpetually a uniform depth of 21 feet for navigable purposes. This expenditure will be of greater benefit than the excavations now being made for the purpose of deepening the channel in the Detroit river at the Limekiln Crossing.

THE Board of Engineers on the deep waterway project from the lakes to the coast is preparing material for a preliminary report which will present estimates on the work of damming the eastern end of Lake Erie, in order to maintain a continuous depth in the connecting waters between Lake Erie and Lake Huron. The channel has already been artificially deepened, but a strong westerly wind drives the water back and this feature is found to be a most difficult one to allow for. It is more than likely that the first set of works will call for others at various points so as to compensate for the surface action of winds.

THE Weather Bureau, Department of Agriculture, seems to have made a burlesque of itself in reporting weather probabilities regarding the yacht race. Here is an institution costing the people over a million of dollars each year, p'raps nearer two millions, and the prognostications of their weather report is valueless. With observers all over the country we certainly expected something better from this expensive and scientific department.

## LAKE FREIGHTS.

There is a peculiarly stagnant or unquiet feeling in the lake freight market this week. It was expected that freights would harden and the best possible figures would have been offered for tonnage during the past week, yet, such has not been the case, and very little chartering has been done even at last week's quotations. The nominal rate on iron ore from the head of the lakes is now \$1.85, Marquette \$1.60, Escanaba \$1.35 and \$1.50 to Buffalo, with ore cargoes placed ahead to November 1 at \$2.

On account of slow shipments by rail coal freights slumped 10 cents this week to Lake Michigan and a number of cargoes were taken at 90 cents, Ohio ports. Buffalo still holds steady at \$1. The Duluth figure is still at 50 cents, Portage 70 cents.

Grain freights seem to be hardening at 3½ cents on corn from Chicago to Buffalo and 4¼ cents wheat from Duluth or Fort William, immediate charters; tonnage has been placed for future loading at 5 cents and this figure is likely to obtain in a day or two. Chicago to Prescott, Ont., has paid 6 cents this week. Toledo, corn to Buffalo at 2 cents.

Whether it is the Carnegie-Oliver Co. or the Bessemer Steamship Co. that has retained control of the whaleback fleet is not yet ascertained; in any case, either firm will have a lot of tonnage at its command next season and only \$1.25 is quoted for ore though \$1.75 was expected. However, it is yet too early to figure on next season's work with an easy sixty days ahead of free navigation.

Lumber chartering is firm at last week's quotations, viz: \$5.00 per 1,000 feet from Lake Superior.

## AMERICAN SOCIETY OF NAVAL ENGINEERS.

"We are in receipt of many inquiries as to the propriety and prospects of retaining the individuality of the American Society of Naval Engineers," says the Journal of the Society, "now that the Personnel Bill has removed the name of the engineer corps from the navy lists. The inquiries are not unnatural, but imply a misunderstanding of the spirit of the bill. The naval engineer not only exists in the American Navy to-day as distinctly as he ever did, but the whole tenor of the Personnel Bill is to expand the number of engineers by the addition of all the line officers. Eventually this must be the result, as essentially the modern naval officer must be an engineer. There is no diminution of interest in engineering by those who formerly were in the Engineer Corps, and there is no reason for imagining any waning of this interest. There is no profession which is advancing more rapidly, scientifically, than naval engineering. Its work approaches that of an exact science, in which generalities are replaced by positive facts and unimpeachable data. Continuous observation and study is the price of the retention of a position even in the rear ranks of the on marching body of the profession, and this society, with its name and purpose unchanged, will continue to hold a most important place in the engineering world." It should, however, be remembered that mechanical engineering is a trade rather than a profession, nor is a bench hand a scientist.

## MORE NEW TONNAGE.

The Carnegie interests closed contracts this week with the American Ship Building Co., for five large steel cargo steamers with general hull dimensions of 475 feet over all, 50 feet beam and 29 feet depth of hold. These vessels are to have fifteen hatchways, quadruple-expansion engines and Scotch type boilers, to be delivered on the opening of navigation next season.

Estimated cost \$1,925,000, or, on the scale of \$385,000 for each vessel.

"MAKING RECORDS" is the latest pamphlet issued by the Joseph Dixon Crucible Co., Jersey City, N. J. It refers primarily to the successes attained by Dixon pure flake graphite on locomotives, but we presume that the same story would apply to marine engines as well. The book is a practical description of the subject of lubrication, and gives much information that any engineer would be glad to have. Special emphasis is laid upon the fact that graphite is "smoother" than any known material, and is a good conductor of heat and electricity. Acids and alkali will not act upon it, and it will resist a degree of heat that will liquefy nickel. This is stated to be the secret of graphite for reducing friction. The book is an experience meeting of what many users of graphite lubricants have to say, and comprises about 32 pages.



## JACKS' LIFE AT SEA.

Frank T. Bullen writes thus in the London Spectator: Nothing is more loudly regretted by the praisers of old times than the gradual disappearance of etiquette under the stress and burden of these bustling days, and nowhere is the decay of etiquette more pronounced than at sea. Romance persists, because until machinery can run itself humanity must do so, and where men and women live romance cannot die. But were it not for the Royal Navy, with its perfect discipline and unbroken traditions, etiquette at sea must without doubt, perish entirely; and that soon. Such fragments of it as still survive in the merchant service are confined to sailing ships, those beautiful visions that are slowly disappearing one by one from off the face of the deep. Take, for instance, the beautiful custom so full of meaning of "saluting the deck." The poop or raised afterdeck of a ship over which floated the national flag, was considered to be always pervaded by the presence of the sovereign, and, as the worshipper of whatever rank removes his hat upon entering a church, so from the admiral to the powder monkey every member of the ship's company as he set foot upon the poop "saluted the deck"—the invisible presence. As the division between men-of-war and merchantmen widened, so the practice weakened in the latter, and only now survives in the rigidly enforced practice of every person below the rank of captain or mate coming up on to the poop by the lee side. And among the officers the practice is also observed according to rank, for with the captain on deck the chief mate takes the lee side. But since in steamers there is often no lee side, the custom in them has completely died out. To etiquette also belongs the strict observance of the rule in all vessels of tacking "Sir" on to every reply to an officer, or the accepted synonym for his position to a tradesman who is a petty officer, as "Boss" for boatswain, "Chips" for carpenter, "Sails" for sailmaker, and "Doctor" for cook. A woeful breach of etiquette is committed by the captain, who, coming on deck while one of his mates is carrying out some maneuver, takes upon himself to give orders direct to the men. It is seldom resented by junior officers for obvious reasons, but the chief mate would probably retire to another part of the vessel at once with the remark that it was "only one man's work."

In many cases etiquette and discipline are so closely interwoven that it is hard to know where one leaves off and the other begins, but in all such cases observance is strictly enforced as being one of the few remaining means whereby even a simulacrum of discipline is maintained in undermanned and oversparred sailing ships—such as the repetition of every order given by the hearer, the careful avoidance of any interference by one man with another's work in the presence of an officer, and the preservation of each officer's rightful attitude toward those under his charge and his superiors.

Thus, during the secular work of the day, work that is apart from handling the ship, the mate gives his orders to the boatswain, who sees them carried out. Serious friction always arises when, during any operation, the mate comes between the boatswain and his gang, unless, as sometimes happens, the boatswain be hopelessly incompetent.

In the private life of the ship every officer's berth is his house, sacred, inviolable, wherein none can enter without his invitation. And in a case of serious dereliction of duty, or disqualification, it becomes his prison. "Go to your room, sir," is a sentence generally equivalent to professional ruin, since a young officer's future lies in the hollow of his commander's hand. The saloon is free to officers only at meal times, not a common parlor wherein they may meet for chat and recreation, except in port with the captain ashore. And as it is "aft" so in its degree is it "forrard." In some ships the carpenter has a berth to himself and a workshop besides, into which none may enter, under pain of his instant wrath—and "Chips" is not a man to be lightly offended. But in most cases all the petty officers berth together in an apartment called by courtesy the "half deck," although it seldom resembles in a remote degree the dingy, fetid hole that originally bore that name. Very dignified are the petty officers, gravely conscious of their dignity, and sternly set upon the due maintenance of their rightful status as the backbone of the ship's company. Such a grave breach of etiquette as an "A.B." entering their quarters, with or without invitation, is seldom heard of, and quite as infrequent are the occasions when an officer does so. In large ships, where six or seven apprentices are carried, an apartment in a house on deck is set apart for their sole occupation, and the general characteristic of such an abode is chaos—unless, indeed, there should be a senior apprentice of sufficient

stability to preserve order, which there seldom is. These "boys' houses" are bad places for a youngster fresh from school, unless a conscientious captain or chief mate should happen to be in at the head of affairs, and make it his business to give an eye to the youngsters' proceedings when off duty. Of course, etiquette may be looked for in vain here unless it be the etiquette of "fagging" in its worse sense.

The men's quarters, always called the forecabin, even when a more humane shipowner than usual has relegated the forecabin proper to its rightful use as lockers for non-perishable stores, and housed his men in a house on deck, is always divided longitudinally in half. The port or mate's watch live on the port side, the starboard or second mate's watch on the starboard side. To this rule there is no exception. And here we have etiquette in excelsis. Although the barrier between the two sides is usually of the flimsiest, and often quite imaginary in effect, it is a wall of separation with gates guarded and barred. The visitor from one side to the other, whatever his excuse, approaches humbly, feeling ill at ease until made welcome. And from dock to dock it is an unheard-of thing for an officer, save the captain, to go much as look into the forecabin. Of course, exceptional circumstances do arise, such as a general outbreak of recalcitrancy, but the occasion must be abnormal for such a breach of etiquette to be made. Some captains very wisely make it their duty to go the round of the ship each morning, seeing that everything is as it should be, and these enter the forecabin as a part of their examination. But this is quite the exception to the general rule, and is always felt to be more or less of an infringement of immemorial right.

In what must be called the social life of the forecabin, although it is commonly marked by an utter absence of social observances, there are several well defined rules of etiquette which persist in spite of all other changes. One must not lock his chest at sea. As soon as the last landsman has left the ship, unlock the "donkey," throw the key ostentatiously into the till, and, letting the lid fall, seat yourself upon it, and light your pipe. It is a Masonic sign of good-fellowship, known and read of all men, that you are a "Sou' Spainer," indeed at home again. The first time the newly assembled crew sit down gypsy fashion to a meal (for tables are seldom supplied), there may be one, usually a boy, who fails to remove his cap.

Then does the nearest man's hand seek the "bread barge" for a whole biscuit, generally of tile-like texture and consistency. Grasping it by spreading his fingers all over its circumference, the mentor brings it down crushingly upon the covered head of the offender, who is thus initiated, as it were, to the fact that he must "show respect to his grub," as the term goes. But often when the commons have been exceptionally short or bad, an old seaman will deliberately put on his cap again with the remark "'Taint wuth it." If a man wants to smoke while a meal is in progress let him go outside, unless he desires deliberately to raise a storm. And when on the first day of serving out stores a man has been induced to undertake the onerous duty of dividing to each one his weekly portion—"whacking out"—gross indeed must be his carelessness or unfairness before any sufferer will raise a protest. It used to be the practice to load the boys or ordinary seamen (a grade between "A. B." and boy) with all the menial servitude of the forecabin, such as food fetching, washing up utensils, scrubbing, etc. But a juster and wiser plan has been borrowed from the navy, whereby each man takes in rotation a week as "cook of the mess." He cooks nothing, the "doctor" will take care of that, but he is the servant of his house for that week, responsible for its due order and cleanliness. The boys are usually kept out of the forecabin altogether and berthed with the petty officers, a plan which has, with some advantages, grave drawbacks. One curious old custom deserves passing notice. Upon a vessel's arrival in ports where it is necessary to anchor, it is usual to set what is called an "anchor watch" the first night. All hands take part in this for one hour each, or should do so, but sometimes there are too few and sometimes too many. As soon as the order is given to "pick for anchor watch" an old hand draws a rude circle on the deck which he subdivides into as many sections as there are men. Then one man retires while the rest come forward and make each man his private mark in a section. When all have contributed, the excluded one (whose mark has been made for him by deputy) is called in, and solemnly rubs out mark after mark, the first to be rubbed out giving its owner the first hour's watch, and so on.

Nothing has been said about etiquette in the royal navy, because there it is hardly ever to be distinguished from disciplinary rule. Nor has allusion been more than casually made to steamships, whose routine excludes etiquette, having no more room for it than it has for seamanship, except upon rare occasions.

## LETTERS AT DETROIT MARINE POST OFFICE.

OCTOBER 10th, 1899.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Burnell, John R., 2, Merrimac.	Lanbert, Leander, Law.
Brake, Mrs. Mary, Tempest	Ludeman, Henry, Bessemer.
No. 2.	Lyons, Charles.
Buckley, J.	Lindsay, Albert.
Braden, James T., Ramapo.	Lennon, Phil., 3, Curry.
Cullingford, Walter.	Meade, W. H., Appomattox.
Coyles, Edward, Eureka.	Mowat, Miss Frankie.
Campbell, John, Iron Age.	May, John D., Gilbert.
Carlton, H. F., 2, M. T. Green.	Maseau, George.
Dixon, William.	McNicol, Al.
Dwyer, W. J.	McDonald, Frank, Rome.
Evans, W., Fairbairn.	McGlennon, Nelson.
Eggert, A. D.	McGinniss, Chas., 101.
Evans, Robert	Nichols, Fred. A., Iron Age.
Elliott, Thos. H.	O'Day, Thos., North Star.
Fastellie, Fannie.	O'Hagan, Wm.
French, Chas., 2, Mohegan.	Odette, Chas.
Grant, Steve.	Packard, Alex., Mocking Bird.
Gampp, Albert.	Phillips, Charlie, John Owen.
Harris, James.	Ruddle, Walter C.
Hughes, John, V. H. Ketchum.	Spitzer, Frank, Niagara.
Hitchins, Harry.	Sears, Theodore.
Hamburg, N. A., Panther.	Smith, D. B., Endress.
Hall, Dorr, Sel Eddy.	Saux, Fred., 2, Curry.
Jackson, Arthur, Wolf.	Sheffield, Chas., 2, Maytham.
Johnson, J. E.	Terry, Fred., Curry.
Jordan, John, Dimick.	Van Arnam, Chas., Fairbairn.
Knight, Frank, M. T. Green.	Vale, James.
Kidder, Chas.	Williams, Daniel, Potts.
Kartsson, J. G., Gukow.	Ward, Anthony, Yakima.
Kirkendall, Capt. Joe, Plow	Wolf, Franklin E.
Boy.	Wyatt, A. J.
	West, E. M., J. Owen.

## PATENT LEAK ARRESTER.

A device for making temporary repairs in the hulls of ships where a plate is punctured or rent is being put on the market by Ostheimer Bros., 621 Broadway, New York, and 900 Chestnut St., Philadelphia, Pa. It is called the Colomes stopper. During the recent squabble with Spain it was used on the Iowa, and in writing of the incident an eye-witness says: "A shell struck our starboard bow, about one foot above the waterline. It went through the coffer dam, struck a steel hatch, and burst. It started a fire, which was quickly put out. The deck was flooded, but a patent stopper was put in and we were as good as ever." In closing the hole one of the stoppers corresponding approximately to the size of the hole is taken from the case, relieved of its cellulose bag, and thrust through the hole. As soon as it is thrust through it is given half a turn, securing it in place. It is at once pressed closely up against the outside plating of the hull by the inrushing water, where the brass plate serves to cover the hole and partially stop the flow of water. The cellulose pad, the steel washer and the nut are then slipped over the inboard end of the rod, and the nut is screwed home, pressing the bag closely against the hole and sealing the opening. The cellulose bag fits into all the irregularities of a jagged hole, and the powerful pressure of the nut, aided by swelling effect of the water on the cellulose, insures a tight closing of the hole. In cases of collision it more often than not happens that the hole is long and narrow. Such holes may be closed by using several stoppers side by side.

A CARGO of 8,215 net tons of ore (7,335 gross tons) was delivered at South Chicago from Two Harbors last week, by the Minnesota Steamship Co.'s steamer Malietoa, recently built at the Lorain works of the American Ship Building Co. The Malietoa was on an even keel drawing 18 feet ½ inch. If there is any better carrying the world over we would like to hear of it. Of course our steamers are built box like, but they do their work.

THE purchase of the American Steel Barge Co.'s fleet of 30 "whalebacks" by the Oliver Co., of Pittsburg, is believed to indicate a coming revival of the attempt to get through Congress the bill for a ship canal from Lake Erie to Pittsburg. At any rate, all plans for that canal are predicated on the use of whalebacks to carry ore from the Lake Superior mines straight to the mills at Pittsburg. This is on account of the peculiar build and generally light draft of the "whalebacks."



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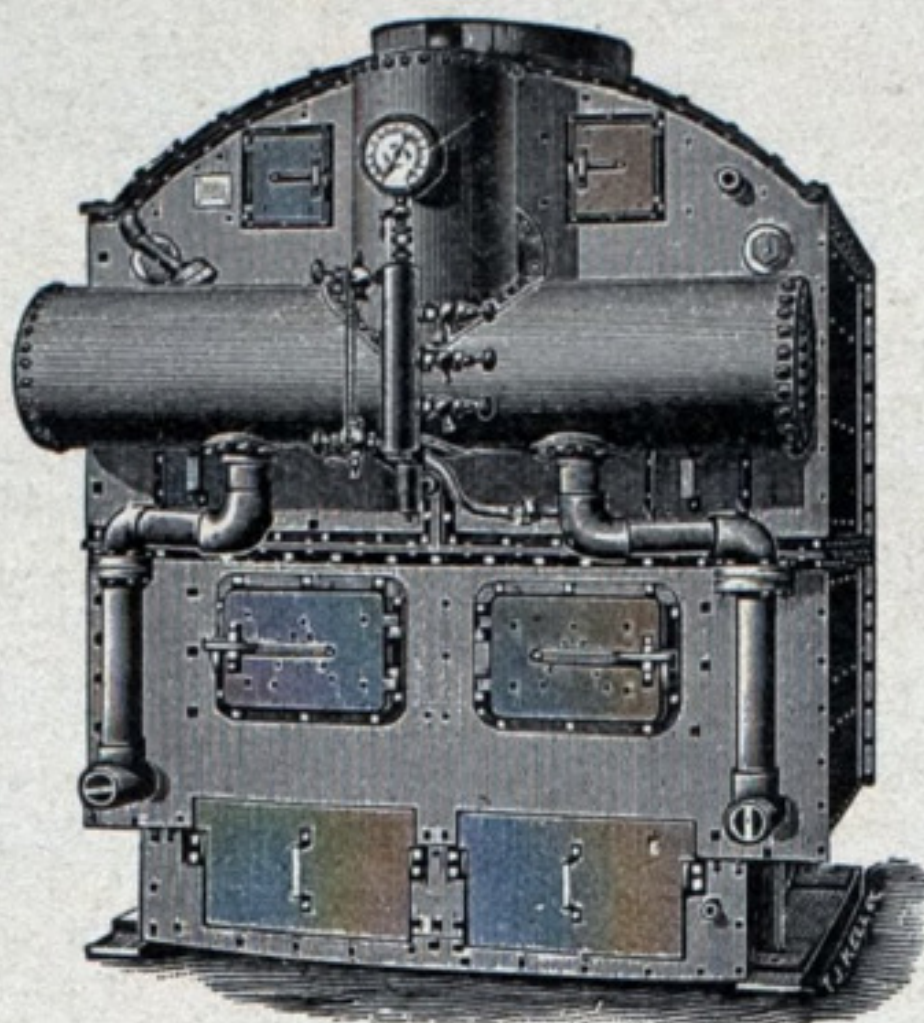
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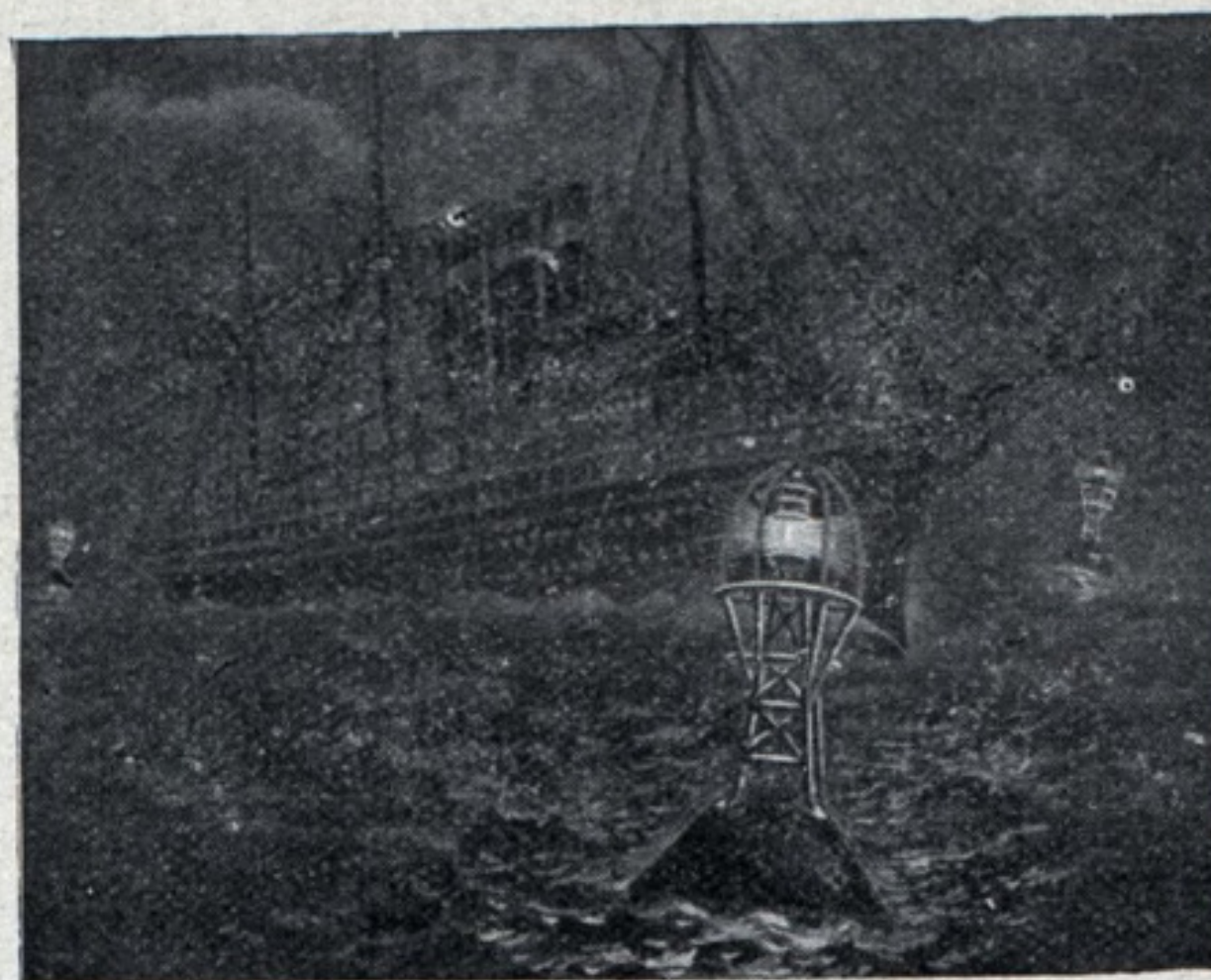
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### THE ACTUAL STATUS OF THE CHICAGO DRAINAGE CANAL.

CONTINUED FROM PAGE 5.

2. That if, at any time, it becomes apparent that the current created by such drainage works in the south and main branches of Chicago river be unreasonably obstructive to navigation or injurious to property, the Secretary of War reserves the right to close said discharge through said channel or to modify it to such an extent as may be demanded by navigation and property interests along said Chicago river and its south branch.

3. That the Sanitary District of Chicago must assume all responsibility for damages to property and navigation interests by reason of the introduction of a current in Chicago river.

Witness my hand this 8th day of May, 1899.

R. A. ALGER.

JOHN M. WILSON,  
Brig. Genl., Chf. of Engrs., U. S. A.

### CAPT. HODGSDON.

Among the few naval captains who are prominent in sharing the glory of the victory of Manila Bay with Admiral Dewey is Capt. Daniel B. Hodgsdon, of Detroit, at present assigned to the revenue cutter Fessenden. Aside from his connection with the victory over the Spanish fleet, he is well known in naval circles.

He ranks third among the captains of the revenue service, and for that reason, coupled with his participation in the battle of Manila Bay, he was selected by the Navy Department some weeks ago to take command of the fleet of revenue cutters ordered to participate in the Dewey naval parade at New York.

This compliment could not have been better placed, and this fact was recognized by the naval authorities when the selection was made. Capt. Hodgsdon has served in all branches of the service. He was born in New York City, February 4, 1836. He early expressed a liking for naval service, and after his graduation from the naval academy he was made a third lieutenant. In 1863 he was made a second lieutenant and was still further promoted to the position of first lieutenant the next year.

He was made a captain in the revenue service in 1868 and has since held that position. During all of the years of his service he has been absent from duty, either on sick leave or awaiting orders, but one year and eleven months. This is a record possibly unprecedented in naval circles.

When the Spanish war broke out he was appointed to command the dispatch boat McCulloch, and was attached to Dewey's squadron in the Pacific. The exploits of the dispatch boat after the battle of Manila Bay are well known, this boat being the one that made the voyage to Hong Kong with the official information regarding the battle. Capt. Hodgsdon is very modest about mentioning his share of the work done during the late war. His connection with the dispatch boat lasted from December 12, 1897, to June 17, 1898. Capt. Hodgsdon has sailed the Fessenden almost continuously since 1893.

### THE AMERICAN LINER PARIS.

Under the heading of "The Underwriting of the Paris," the Financial News, London, contained a curious paragraph to the effect that the American line "have re-purchased the Paris from the underwriters." On the face of it this statement is incorrect, seeing that the vessel was never the property of

the underwriters, who cannot dispose of what does not belong to them. "The surveyors," it is said, "report that the vessel is much less seriously damaged than one would have supposed possible." It is generally understood that this is so; but such a state of affairs would point in the ordinary course to a vessel being repaired by her owners and the expense of the repairs recouped to them by their underwriters.

The writer further states that the salvage company will receive £75,000, and adds "now the underwriters re-sell the boat to the steamship company for her salvage value of £150,000, or, after paying the wrecking company, £75,000, and the steamship company pays for her alterations and repairs." But underwriters cannot sell a vessel until she becomes theirs on the payment by them to her owners of a total loss—which has not occurred in the present instance, and, according to the writer's description of the surveyors' report, is not likely to occur.

The paragraph concludes: "If her lengthening (what lengthening?) and repairs cost £100,000 she is still cheap to the company, which would to-day be obliged to pay at least £450,000, if not more, for an entirely new ship, deliverable not earlier than two years from date." If the lengthening, which is apparently contemplated, and repairing cost together £100,000, the repairing only (which is all that the underwriters would be responsible for) would cost very much less; and on this showing the vessel cannot possibly be a constructive loss, and consequently does not become the property of the underwriters. We are again brought round to the query, "how could they 'sell' or 're-sell' her?" The paragraph is most confusing, and could only be put together by a writer unversed in the principles and practice of marine insurance.—Fairplay.

### VISIBLE SUPPLY OF GRAIN

As compiled for THE MARINE RECORD, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Buffalo.....	1,236,000	1,119,000	114,000	56,000	117,000
Chicago.....	9,210,000	5,852,000	1,404,000	380,000	7,000
Detroit.....	685,000	22,000	15,000	11,000	.....
Duluth.....	6,275,000	169,000	72,000	155,000	333,000
Fort William, Ont.	1,500,000	.....	.....	.....	.....
Milwaukee.....	33,000	10,000	.....	.....	.....
Port Arthur, Ont.	100,000	.....	.....	16,000	18,000
Toledo.....	2,129,000	792,000	701,000	10,000	1,000
Toronto.....	81,000	.....	3,000	.....	11,000
On Canal.....	166,000	421,000	307,000	9,000	233,000
On Lakes.....	1,672,000	1,811,000	196,000	.....	807,000
Grand Total.....	44,335,000	14,750,000	6,630,000	806,000	1,731,000
Corresponding Date, 1898.....	12,210,000	22,202,000	5,469,000	718,000	2,319,000
Increase.....	2,192,000	2,260,000	.....	97,000	290,000
Decrease.....	.....	.....	698,000	.....	.....

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

Major Symons, Corps of Engineers, U. S. A., has received from the Washington headquarters of the Corps of Engineers, a communication notifying him of his appointment on a committee to inspect the breakwater construction at Ashtabula, Fairport, Conneaut and Black river harbors, O. The committee will meet in Cleveland, at the call of the senior officer. The other members are Col. Jared A. Smith and Major Clinton B. Sears.

### NOTES.

TORONTO papers say that pilots are alarmed at the low water in the St. Lawrence. In some places the rapids are a good twelve inches less water than at this time last year. The water in the bay is also about six inches lower than normal at this season.

M. IVAN GOREMYKIN, Russian Minister of the Interior, has notified the United States Ambassador at Moscow that the heirs of the late Anthony Pollack, an American, who, with his wife, was drowned in the wreck of La Bourgogne in July, 1898, are entitled to a prize of \$100,000, offered by the St. Petersburg Government. By a strange irony the prize was offered in an international competition for the best invention of life-saving apparatus for use in wrecks at sea.

ACTING SECRETARY ALLEN has prepared the full statement of estimates which will be submitted to Congress for the maintenance of the naval establishment for the next fiscal year. These amount to \$73,045,183, which is an increase over the appropriations for the current year of \$24,537,187. Included in the increase for the next year are appropriations of \$12,268,474 for public works and navy yards and stations. There is also an estimate of \$2,021,000 for the new naval academy.

THE committee appointed by the Isthmian canal commission, under the leadership of Rear-Admiral Walker, which recently went to Paris to study the work of the Panama canal company, has returned to this country after an absence of six weeks. The committee spent some time in Paris and afterwards visited the Kiel, North Sea and Manchester ship canals. In the near future this committee will go to the Isthmus to study the situation thoroughly on the ground. The members of the committee are quoted as having expressed themselves favorably on the prospects of the completion of the Panama canal, believing that it will eventually be cut through, whether it is taken up by the Americans or not.

FRENCH line steamer La Lorraine has just been launched from the company's shipyards at Saint Nazaire, France. This steamer is a sister ship of La Savoie, being constructed there for the same company for its service between New York and Havre, and will be placed in regular commission during the early part of this coming spring. These steamers will be the largest operated by this company, being of 15,000 tons and of 25,000 horse-power each, and will make the trip across the Atlantic in less than six days, their contracted speed being a fraction over 22 knots. La Savoie will also be launched shortly, and is to be ready for the New York-Havre service in time for the Exposition travel of next year.

AT last an end has come to Nelson's famous flagship, the Foudroyant. Since the old hull was sold a few years ago by the British Admiralty it has suffered all kinds of vicissitudes unworthy of so noble a hulk. She has been dragged around for exhibition purposes at sixpence a head and it has even been threatened to turn her into a coal barge, the fate of many a gallant vessel. Finally she was broken up to be made into canes, but before this could be done an enterprising English publisher, who is giving away "dirt cheap" Lubbock's 100 best books, bought up her scattered timbers and had them made into bookcases which would be as imposing to the eye as the books are to the mind. These he is selling for \$12.50 cash, and he has a metal plate screwed on every one guaranteeing that not only the wood, but every bolt, screw and nail came from the ship.



**BARRATRY.**

A case of crime on the high seas is before the courts of the Dominion. It appears that in June last the schooner Juventa sailed from Whitehead for Halifax with a load of canned lobsters. On the coast the Juventa met the schooner St. Thomas, from the same port, and the lobsters were passed over to her. Then the Juventa was scuttled in order to make it possible to put in a claim for insurance on vessel and cargo. The St. Thomas sailed with the lobsters to St. Pierre Miquelon, where they were sold to the French. Then this schooner put to sea, and she was scuttled, also covered by a good insurance policy. The insurance companies were asked for the amount of the policies on both craft, but the facts became talked about, and instead of paying over the money the captains of the vessels and members of the crews were arrested, charged with conspiracy to defraud, and now all hands are in prison.

In the examination before the magistrate it appeared that one of the captains was to receive \$600 for his share of the enterprise. They were Nova Scotia vessels.

**VARIATIONS IN LAKE LEVELS.**

The Department of Agriculture, Weather Bureau, is now investigating the variations in lake levels and the atmospheric precipitation. We take the following excerpt from a pamphlet recently issued on this subject:

"Beginning in 1887 the level of Lake Michigan began to fall and continued falling until 1893. The precipitation began to diminish in 1886, and was below normal in 1887, 1888, and 1889, the average deficiency in the watershed during the last-named year being 6 inches. The precipitation of the following year, 1890, was almost an inch above normal, yet the level of the lake continued to fall, and it was not until two years or more than normal rainfall occurred, 1892 and 1893, that the downward course of the lake level was checked. It should be noted that during an earlier period, 1870 to 1875, there was a greater deficiency of precipitation than occurred in 1886-1889, yet the lake did not fall to so low a stage as in the last-named period. The level of the lake continued to fall after the slight check in 1893, the rainfall of 1894, 1895, and 1896 being deficient. The lowest stage of the 40 years was reached in 1896. That the level of the lake should fall was to be expected, but that it should remain so far below the normal stage in spite of the fact that the rainfall of both its own watershed and that of Lake Superior was not far from average seems inexplicable, unless we look elsewhere for the underlying causes.

"At this point in the investigation the attention of the writer was called to the fact that in 1885 and 1886 the slope between Lake Huron and Lake Erie was greater than at any other time covered by the records, and that immediately following this period the difference in levels between the two lakes began to diminish. Mr. George Y. Wisner, member of the Board on Deep Waterways, who communicates the information, expresses the opinion that it seems probable that the excessive slopes existing in 1885-1886 were the initial causes which led to the increase in cross section recently found at the head of St. Clair river. The further

opinion is expressed that the levels of Lake Huron, Lake Michigan, and Lake Erie have, to a certain extent, been affected by the deepening of connecting waterways and outlets. This, together with the increase in cross section at the head of St. Clair river, has apparently permanently lowered the level of Lake Huron and Lake Michigan something over a foot, and incidentally St. Mary's river below the rapids a similar amount.

"These conclusions appear to be confirmed by the rainfall records.

"Summarizing the foregoing we may remark that it seems possible to indicate the level of the lakes, approximately at least, by closely observing the precipitation in the various watersheds, especially the amount of snow and the manner of its disappearance. All inferences as to the probable effect of precipitation on lake levels must be contingent, however, upon the maintenance of a constant cross section and slope in the present connecting channels."

**MARINE INVENTIONS.**

Patents on marine inventions issued October 3, 1899. Reported specially for the MARINE RECORD. Complete copies of patents furnished at the rate of ten cents each.

- 634,026. Trussed suspension bridge. W. H. H. Pittman, Stillwater, Okla.
- 634,028. Means for launching life-boats. James Pollitz and E. H. Cox, New York, N. Y.
- 634,217. Means for marine propulsion. J. A. Secor, New York, N. Y.
- 634,322. Submarine tunnel. C. H. Buckelew, Plainfield, N. J.
- 634,328. Apparatus for cleaning ships' hulls. W. P. Freeman, New York, N. Y., assignor to the Electric Stone Cleaning and Renovating Co., Jersey City, N. J.
- 634,329. Divers' stage for cleaning ships' hulls. W. P. Freeman, New York, N. Y., assignor to the Electric Stone Cleaning and Renovating Co., Jersey City, N. J.
- 634,368. Screw-propeller. Thomas Pounds, Plymouth, England.
- 634,445. Life saving appliance. Hubert De Wilde, Gand, Belgium.
- 634,554. Dry-dock. W. H. Gartz, Bernardsville, N. J., assignor to Austin Wright and Mary L. Gartz, same place.
- 634,563. Ventilating and cooling stoke-holds of steamships. Max Robitshek, Vienna, Austria-Hungary, assignor of one-half to Leo von Herz, same place.
- 634,574. Propeller. J. S. Grant, San Francisco, Cal.
- 634,664. Shallow-water propeller. V. A. Gates, Charleston, W. Va.
- 634,717. Bridge-gate. Harry Chesman, Chicago, Ill.
- 634,814. Hull. J. W. Glaholm, Nanaimo, Canada.

THE progress making in the construction of the new navy is exhibited in the report prepared by Chief Constructor Hichborn, from which it appears that of the battleships, the Kerasarge is 69 per cent. advanced toward completion; Kentucky 93 per cent.; Illinois 70 per cent.; Alabama 90 per cent.; Wisconsin 77 per cent.; Maine 14 per cent.; Ohio 6 per cent. and Missouri 1 per cent. The cruiser Albany, building in England, is 85 per cent. advanced, and four monitors range from 3 to 25 per cent. Sixteen torpedo boat destroyers, and 17 torpedo boats under construction range all the way from 2 to 98 per cent. The submarine boat Plunger has come to a standstill, remaining at 85 per cent.

**REPORTED BY THE LOOKOUT.**

The captain of the schooner Laura Miller, which sunk off Toledo, Sunday, says the wreck lies thirteen miles out in the lake.

Capt. James B. Lowe, late of the steamer Presque Isle, is in Detroit overseeing the fitting out of the new steamer Angelina. Capt. S. A. Murphy is sailing the Presque Isle.

Capt. Moore has succeeded Capt. Thos. Sloan as master of the steamer E. S. Pease. Capt. Sloan left his command on account of illness. Capt. Geo. Bartholomew shipped as first mate of the Pease.

The B. Uhrig Fuel Co. has leased a piece of dock property at Milwaukee 125 feet deep by 677 feet in length. The company will erect a modern coal dock with six clam-shell scoops operated by electricity.

The Delaware Lakawanna & Western Railway Co. has under contemplation the establishment of a line of passenger and freight steamers on Lake Ontario and St. Lawrence river, with Oswego as the initial point.

A great Misfortune.—"Oh, Mr. Smith, did you hear the sad news about Mrs. Mead?" "No, Mrs. Wilkins. I did not. What was it?" Her husband was drowned with his six karat diamond stud on, and his body can't be found."

The stock of wheat in store at Duluth, on Saturday last, was very nearly three times as much as on the corresponding date a year ago. The stock in store on Saturday was 6,274,912 bushels. The stock in store a year ago was 2,145,988.

Capt. John Weeks, who sailed seven years for the Minnesota Steamship Co., but who spent last winter and this summer in Europe, has returned home. His first step was to qualify as master of the Amazon, a schooner recently purchased by James Corrigan, Cleveland. Capt. Weeks succeeded Capt. F. B. Cody.

The fact that the Deep Waterway Commission will make a report to the coming Congress has started a discussion in some of the seaboard cities as to the advisability of appropriating \$100,000,000 to give Chicago and other cities on the Great Lakes water connection with the ocean. The plan for a canal big enough to bring ocean ships to the heart of the country is recognized as entirely practicable from the engineering and financial standpoints, and the project is being discussed from the varying standpoint of self-interest. The Philadelphia Record predicts that all the Atlantic and Gulf cities and even those on the Pacific coast will see in the canal a menace to their commercial supremacy and fight it in Congress.

The report is not vouched for but it is said that Capt. Peter Barry, late of the firm of the Barry Bros. Towing Co. of Chicago, declares positively that he will start a tug line in Chicago, despite the presence of the Great Lakes Towing Co., and the fact that he holds \$4,000 worth of stock in the newly organized trust. Barry says: I am a tugman and I have been one all my life. Am I to sit down the rest of my days simply because a lot of moneyed men have bought out my interest in the Barry Bros.' tug line? Or am I to go in some other business which my training does not suit me for, and all on account of the trust claiming a monopoly on the towing of the Great Lakes? No, sir; towing is my business and will be my business.

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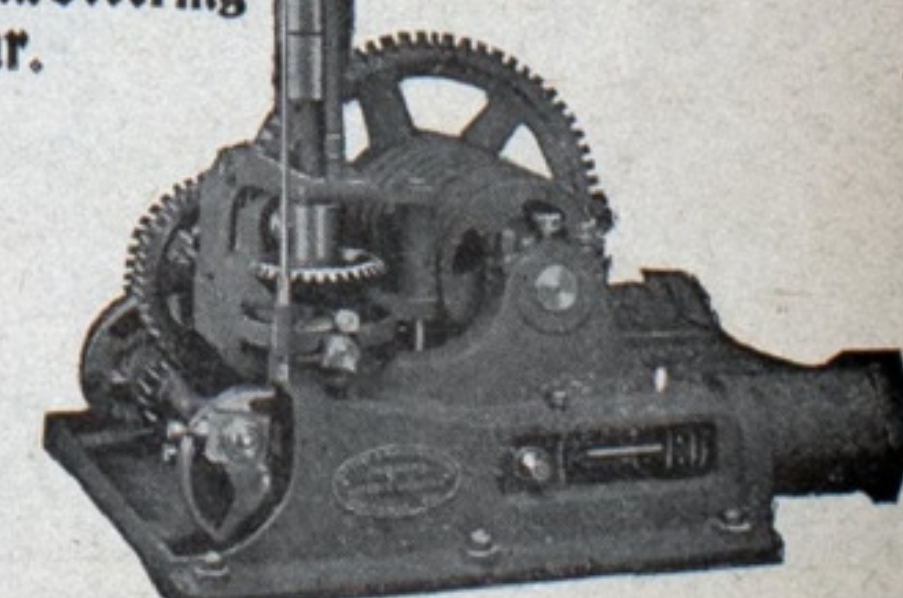
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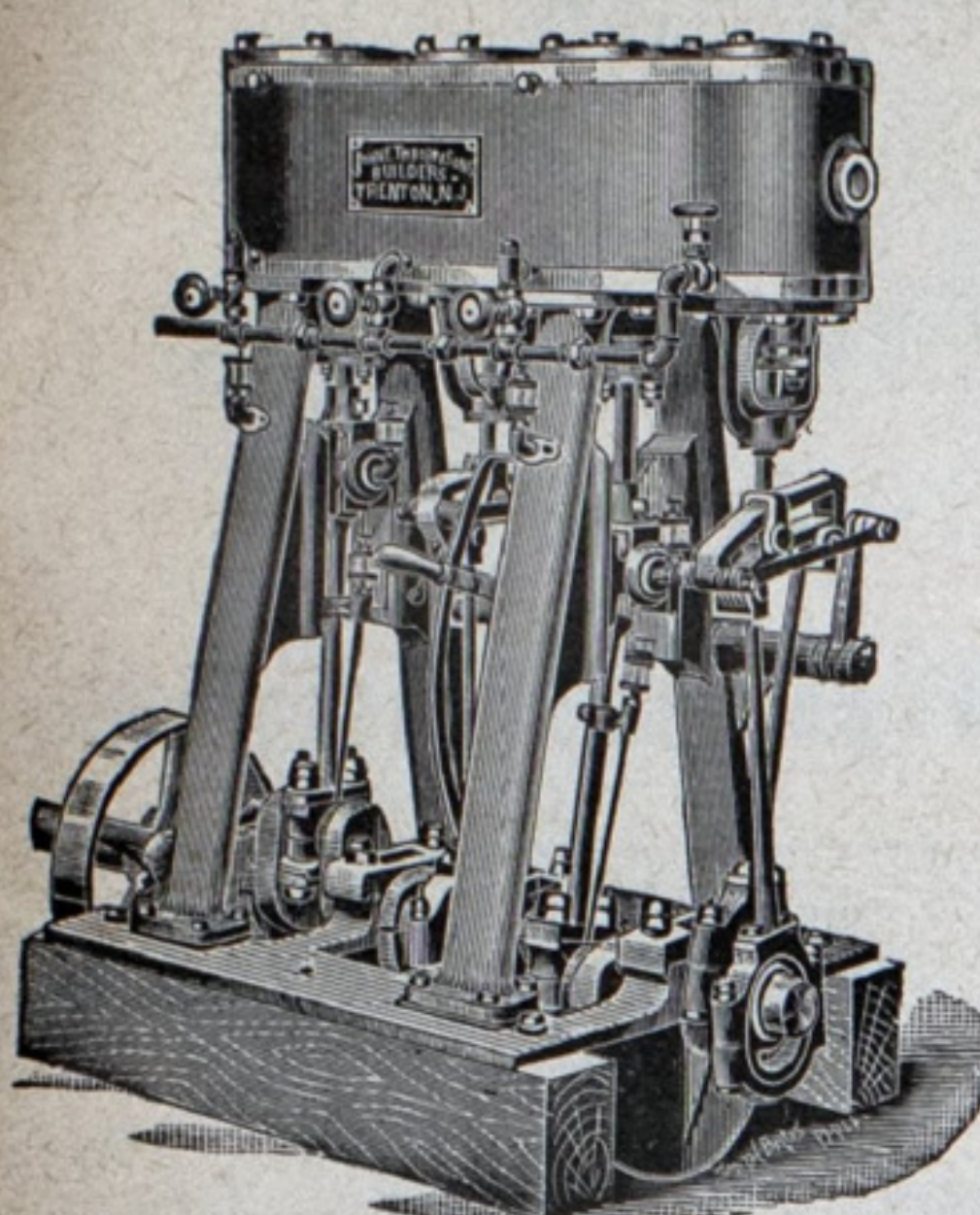
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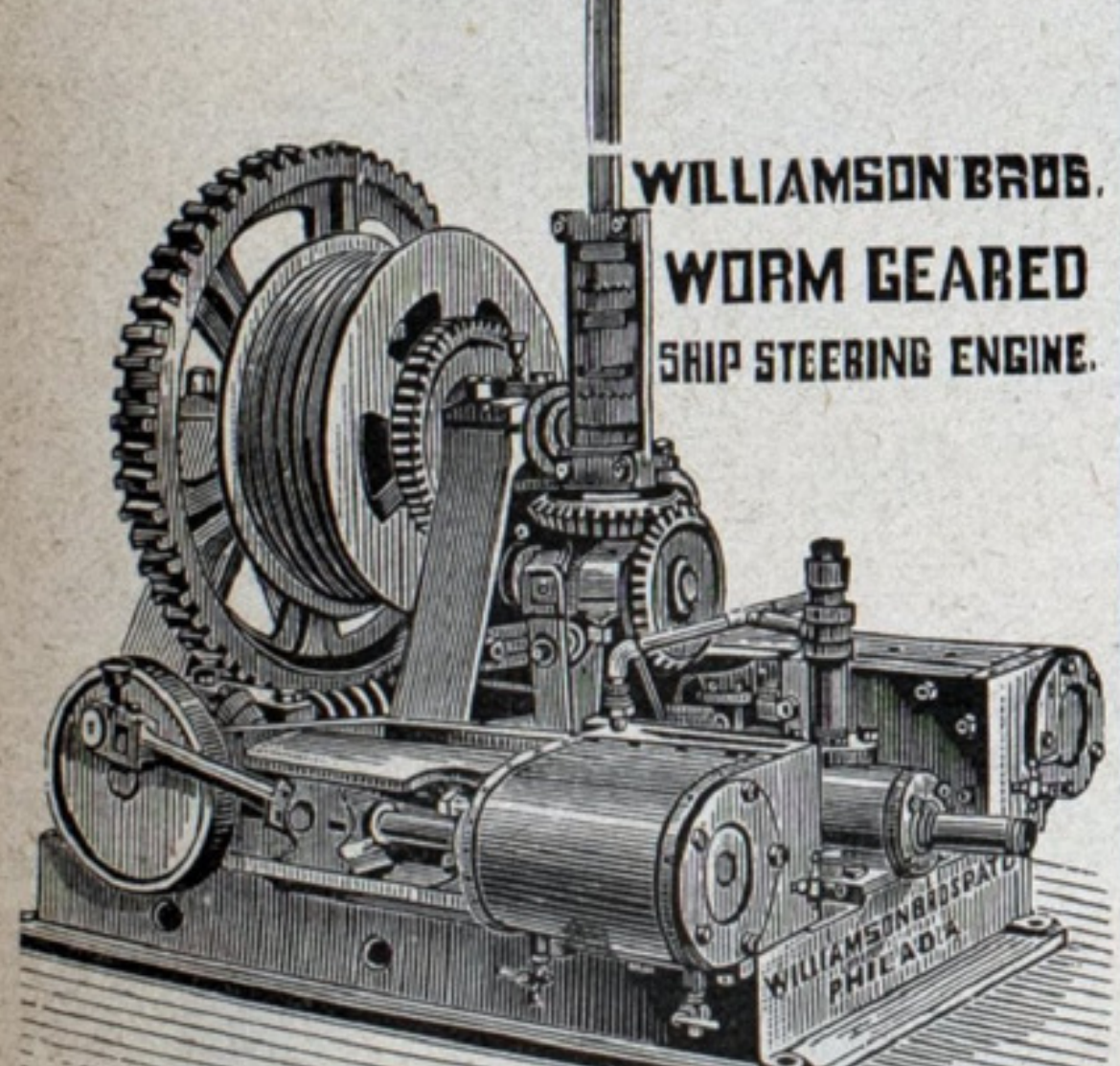
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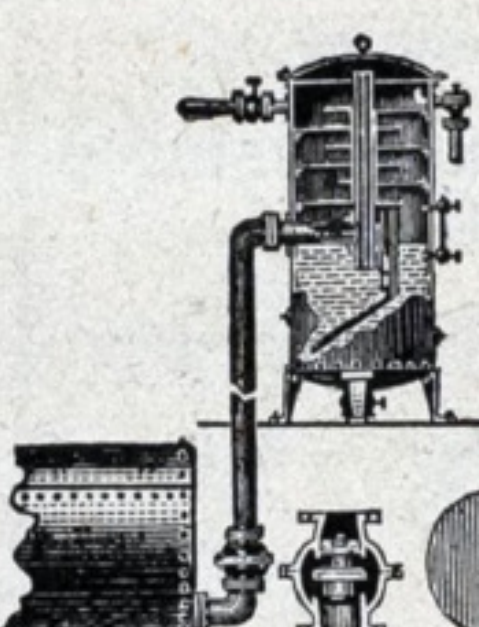
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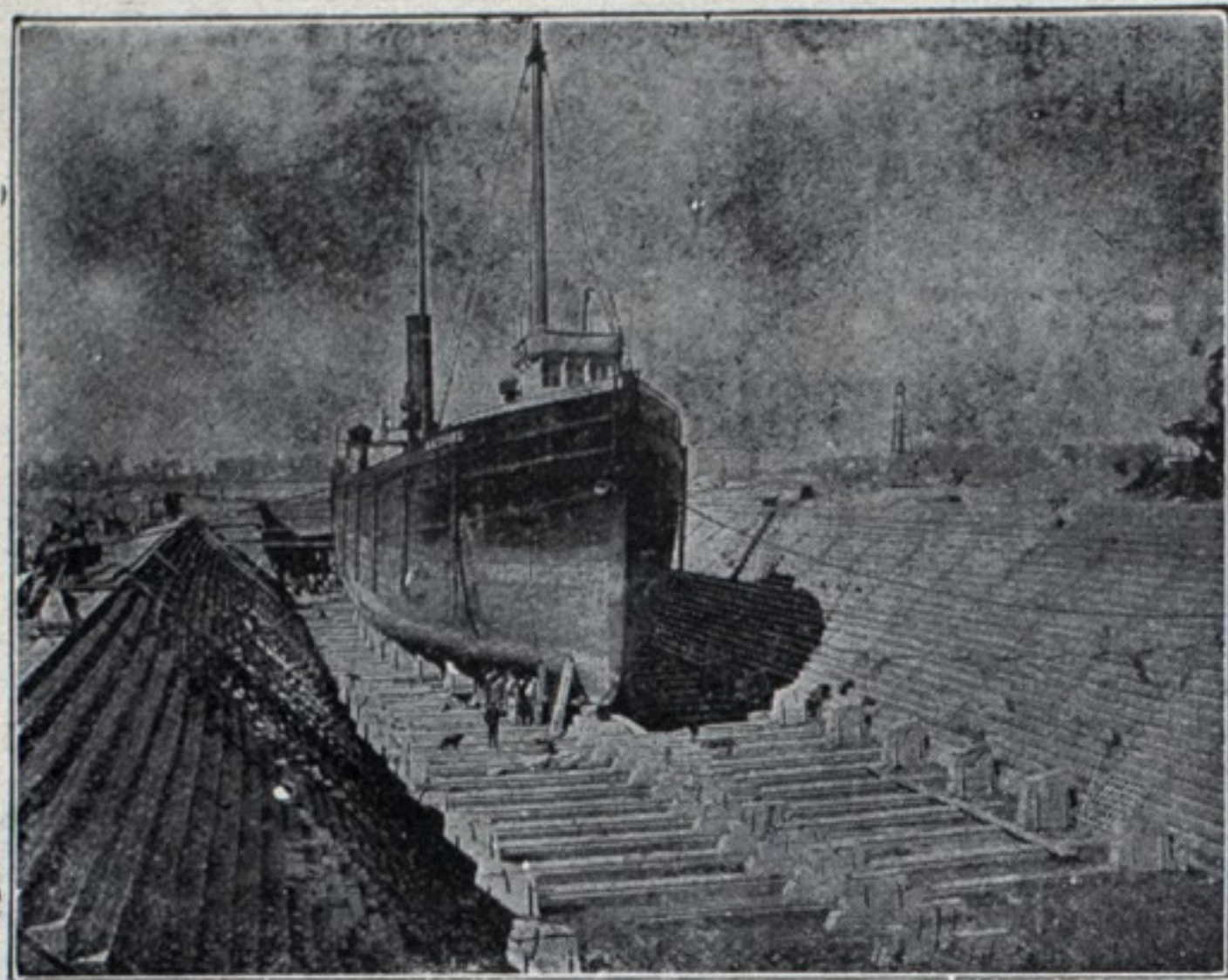
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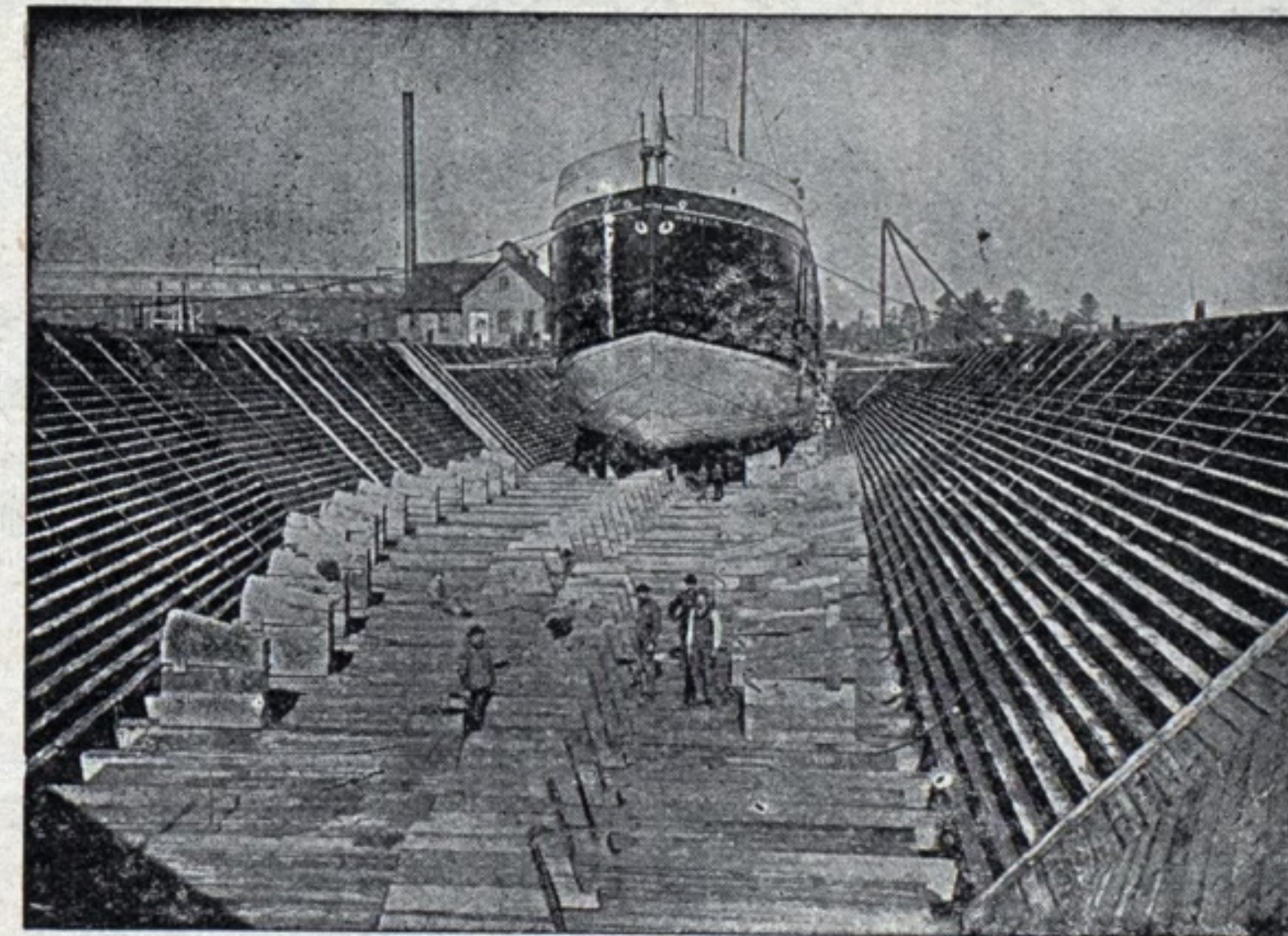
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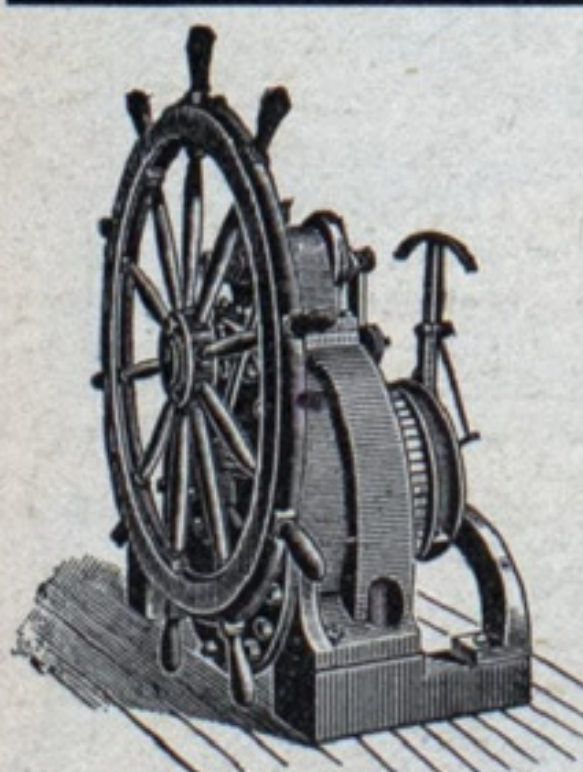
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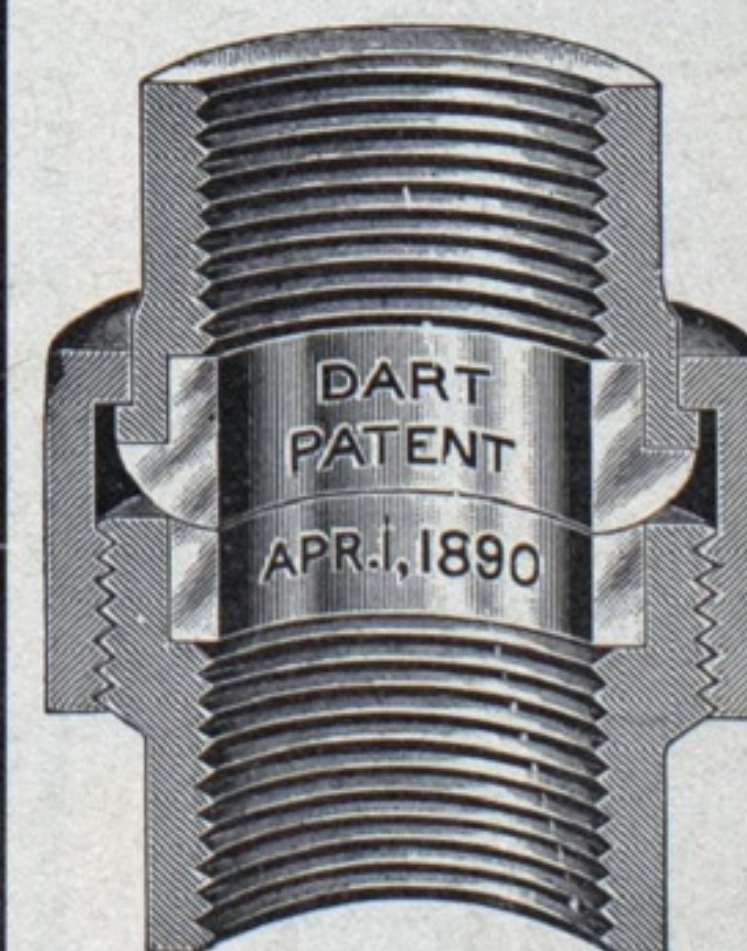
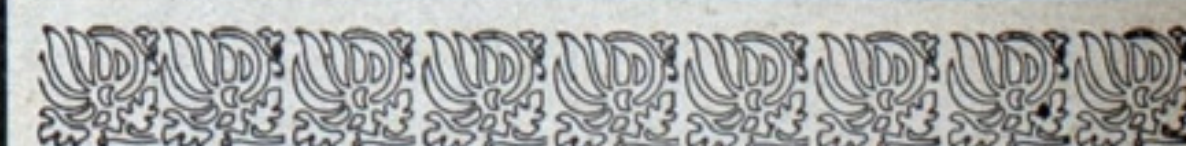
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